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Drug & Cosmetic INDUSTRY

October 1944

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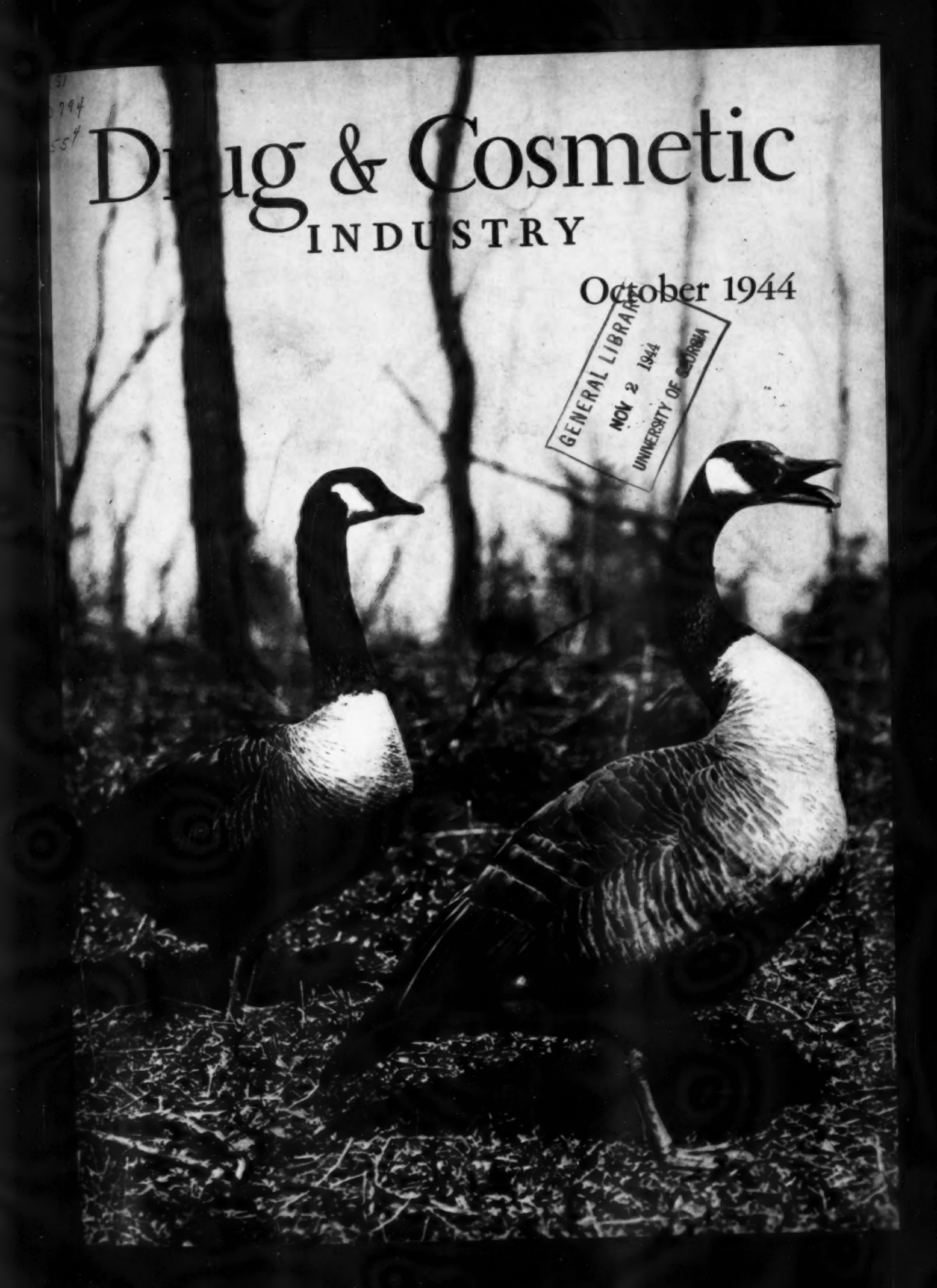
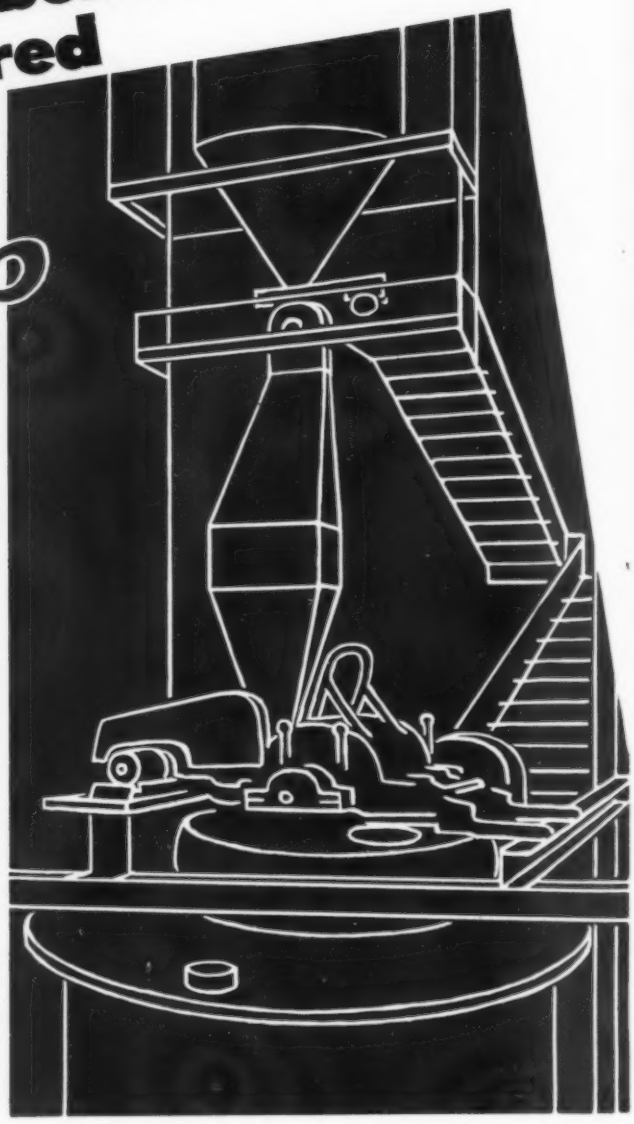


THIS IS THE PROCESS EQUIPMENT

that reduces the dried carbonate to fine powdered

Snow Top

PRECIPITATED CALCIUM CARBONATE



Micropulverized—a big word that means a million tiny particles of Snow Top Precipitated Calcium Carbonate. Uniformly fine, fastidiously pure—that's Snow Top. To give you this product-perfection, Snow Top is manufactured under strict laboratory control during every step of its manufacturing process. Here, for example, is what happens to the carbonate as it leaves the dryer.

The carbonate coming from the dryer is in the same stick-like form into which the wet carbonate was pressed as it entered the dryer. These sticks must be broken up and separated into the micro-size particles that were formed in the carbonators before the product is ready for shipment and use.

The carbonate is picked up as it leaves the dryer by a stream of filtered air and conveyed to a closed receiving tank, from which it is delivered to a micropulverizer at a uniform rate. Here it is whirled at high speed with the result that the lumps, striking and rubbing against each other, disintegrate into minute particles and emerge as the familiar white powder which is Snow Top Precipitated Calcium Carbonate.

Photographs of these particles, taken at a magnification of 28,000 times, show that the action in the micropulverizer is not a pulverizing or grinding, but merely a separation into the particles that were formed during carbonation. This is the final step in the process of production of Snow Top, except for loading the finished product into bags for shipment. The dry powder is again picked up by the stream of filtered air and conveyed to the bagging machines or storage tanks.

During this entire time and until the bags are opened for use by the customer, the carbonate is not touched or handled by the operators, but is in contact only with the equipment and conveying air and therefore free from any chance of contamination.

Snow Top Precipitated Calcium Carbonate ★ *Abietic Acid* ★ *Nuchar Activated Carbons* ★ *Liquid Caustic Soda* ★ *Chlorine* ★ *Lignin* ★ *Ligro Crude Tall Oil* ★ *Indusoil Distilled Tall Oil* ★ *Tall Oil Pitch* ★ *Sulphate Wood Turpentine*

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American infantry unit carrying full equipment, including machine gun, on Normandy Beachhead. Signal Corps Photo.

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Drug & Cosmetic INDUSTRY

OCTOBER 1944

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The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York, 1, N. Y., U. S. A. Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander (on leave with U. S. Army), Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly. Subscription price—$2.00 a year, in advance; Foreign Countries, $3.00. Single copies, 25c; Back issues 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1944 by Drug Markets, Inc.

Printed by Sun Printing Co., Pittsfield, Mass., U. S. A.

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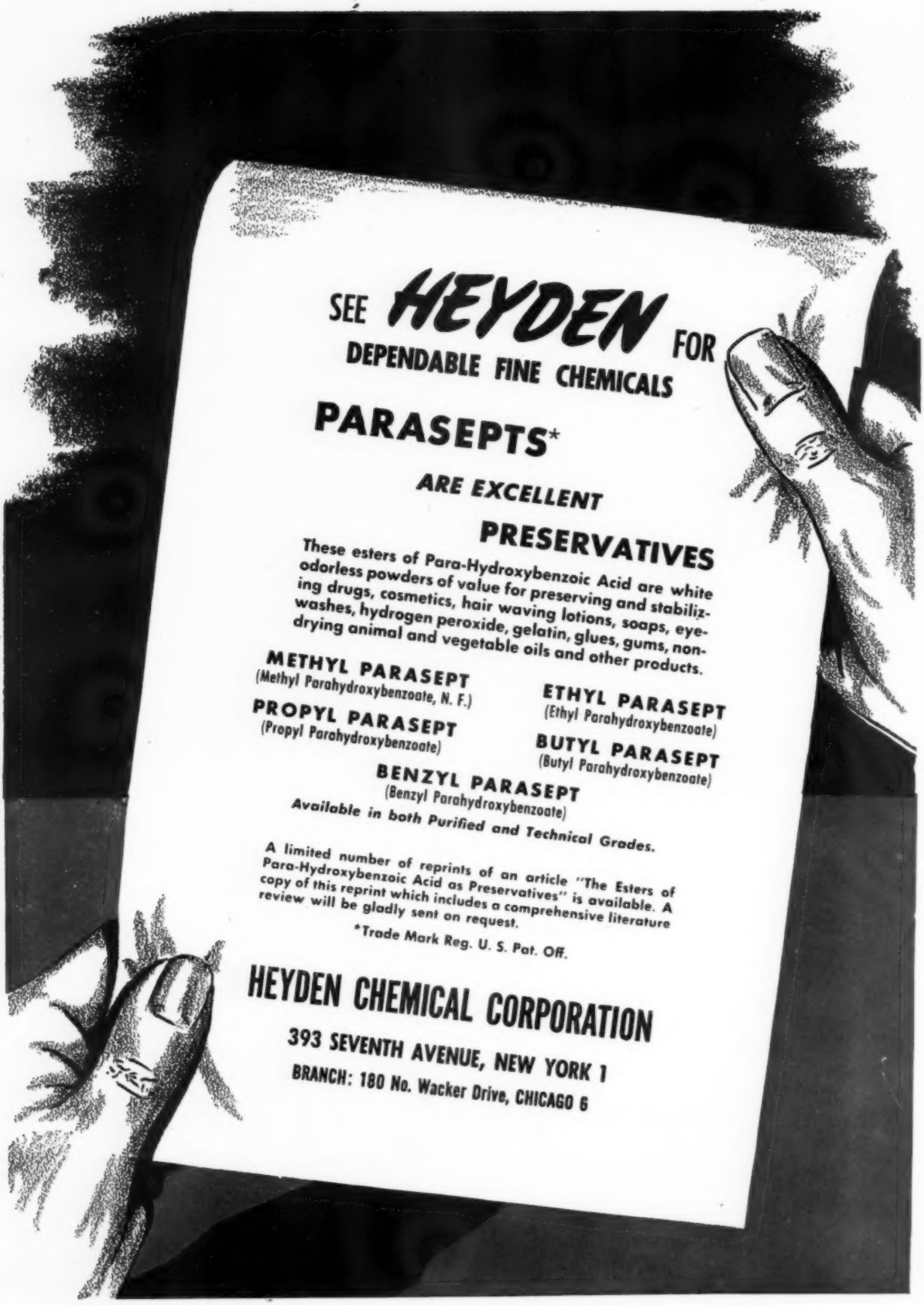
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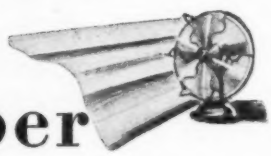
INSIDE NEWS

OCTOBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1944

Christmas in October



Ordinarily, it's difficult to foresee the future, but here is one event we can forecast and provide for *now* — Christmas.

Every one of us has a son or other relative in the armed forces, or a boy from our own Company. Every one of us knows what a terrific letdown Christmas would be without a package from home.

The boys in the army and navy aren't fighting *all* the time — the long periods of inaction are monotonous and hard to bear. It's then that strange thoughts are born — "Have they forgotten me back in the office (or shop)?" — "Will I get my old job back?" — "Wonder if the old crowd are stopping in at Joe's for a beer on the way home Christmas Eve?"

Christmas is a sentimental season. It's easy to be Christmasy in December, but we have to do something about it now, in October. So let's be sweating Santa Clauses and do our Christmas shopping — *and mailing* — now.

First, decide what you think the boy would like — books, candy, cake, razor blades, tooth and shaving creams, etc. Then talk to the special departments that all the larger stores maintain. They will not only suggest things you might overlook, but will tell you how to pack it or do it for you.

But you must initiate the move. Don't wait till Christmas and then be sorry you forgot.

We are publishing this message to you in the pages of your business paper with the belief that you read it in your office, where you can do something about it. Evening newspapers, magazines, and radio are read and heard at home and their messages must be remembered and carried to the office. But if you are reading this in your office, pick up your phone and order those Christmas packages now! 760

Ultraviolet Sterilization

A method has been developed for sterilizing and concentrating pineapple and other fruit juices at a temperature which will not destroy the nutritional value or the flavor. The method is based on the use of ultraviolet radiation to sterilize the air in the room in which the juices are processed, and also to sterilize the juice itself. The juice is passed in a very thin film flowing under the sterilizer lamps, and then goes directly to the vacuum evaporator, where concentration is assisted by agitating the juice with dry ice which also has been subjected to the ultraviolet sterilization. 761

Biscuit Packing

A machine has been patented which rapidly counts, arranges and stacks ready-to-bake biscuits or similiar articles, preparatory to packaging or sealing in cans. 762

Polishing Cloths

Polishing cloths or rags intended primarily for use on metals often consist of woolen fabrics which have been saturated with fatty oil, mineral oil, paraffin, or a mixture of these, containing in suspension a very finely powdered abrasive such as tripoli or infusorial earth. Suspensions of abrasive in soap solutions, pine oil, ammonia, etc., have also been used. 763

Fire Extinguisher

A product made by agitating the root of the African plant Randia vestitia in water forms a foam that is finding commercial use as an excellent fire extinguisher. 764

Bamboo Possibilities

American-grown bamboo poles, not acceptable before the war where long smooth surfaces were desired, now compete with imported bamboo by a process of impregnating the stalks with a plastic material. Bamboo pulp shows experimental promise for making thin white paper as for cigarettes. 765

DDT for Moth Proofing

The new synthetic insecticidal raw material, DDT, which is finding extensive wartime use as the toxic ingredient in Army louse powder, is also indicated to have useful applications as a moth proofing agent. Wool treated with a water emulsion containing an extremely dilute concentration of DDT has been found to be resistant to carpet beetle larvae. Underwear treated with the emulsion was found to retain its protective qualities even after repeated washings with soap and water over a period of several months. 766

Fanweed Oil

Fanweed Oil, a high grade vegetable oil, has unusual properties, making it suitable for special lubricants in addition to its value for its drying properties in paints, lacquers and as a purified salad oil. Fanweed contains 30 to 40% oil and can be produced in unlimited quantities. Test plantings at Montana State College show a yield of 500 lbs. per acre. 767

Fish Oil

The Florida Agricultural Experiment Station suggests a combined fish oil, using cod liver oil high in vitamin D but low in A with shark liver oil for which the reverse is true for a balanced vitamin oil. 768

Pineapple Development

According to an official report, Brazil has been experimenting for several years crossing existing varieties of pineapple with wild varieties to produce a thornless variety. The state of Sao Paulo is favorable for pineapple culture. 769

Motor Lubricants

An improved pour-point depressant for motor lubricants has been developed by a large chemical manufacturer. The producer states that the product is priority-free and offers the advantages of improved pour-point stability, satisfactory winter storage and pourability at below zero temperature. 770

Cane Wax

Cane wax made in processing sugar cane is now in commercial production in Australia. The small production so far is taken by the government. 771

Citrus Pectate Pulp

Citrus Pectate pulp is solving the problem of storing and shipping synthetic rubber which tends to flow and stick to the walls of shipping containers. The rubber adheres to the pectate pulp film eliminating adherence to the containers. The pulp film forms a minute and entirely innocuous constituent of the rubber. 772

Soilless Farms

Soilless Farms are being established in barren south Pacific islands to provide fresh vegetables for GI's and the Air Force. The army is establishing hydroponic specialists for these projects. 773

Radio Protects Your Breakfast

Radio frequency conductivity measurements will tell the age and condition of shell eggs more quickly and much more accurately than methods now in use. The tests can be applied to fresh eggs or to those held in storage. 774

Clean Ships for Fish

Fish will reach the canning plants in better condition when the holds and decks of the fishing boats are properly cleaned and sterilized. Formaldehyde was used for this purpose some years ago, but has largely been replaced by "free-chlorine" compounds. Re-

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cent Canadian tests show that the trend to chlorine compounds has been unfortunate, and formaldehyde solution, 9 parts per thousand, is more effective. The corrosive action of the formaldehyde on metal parts can be inhibited by additions of ½ part per thousand of sodium nitrite, without destroying the bactericidal power of the solution.

The surfaces to be treated must be scrubbed clean of adherent protein and fatty residues. 775

Coffee Extract

The problem of maintaining a desirable flavor in quickly soluble coffee powder has been receiving the attention of food technologists for a long time. One of the latest in the series of patents on coffee powder is based on the idea of leaving in the natural coffee oil that is usually removed because of its tendency to rancidity.

It has been found that by hydrogenating some of the coffee oil, and also including this in the product, the natural coffee oil, with its contribution to the flavor, can be kept from becoming rancid. Other hydrogenated vegetable oils may be substituted for the hydrogenated coffee oil, but the latter is preferable. 776

Condensed Milk for Ice Cream Making

In making ice cream and candy it is of advantage to use a highly concentrated condensed milk with a low lactose content. But the condensed milk with lactose removed has a tendency to thicken very rapidly and to a high degree, so that it cannot be stored for long periods before use. It has been found that when cane sugar or dextrose is added to the milk during processing, so that the final product has a high content of sugar in the water and sugar portions, the low lactose skimmed milk remained sufficiently fluid for use even when it is stored for considerable periods at a temperature of 50 degrees F., or below. This sugar, of course, can be figured in the final mix. 777

Vitamins in Sweets

Following the idea of making your vitamins easy to take, as well as that of adding vitamin concentrates only to products which will stand up well under storage conditions, the National Research Laboratories of Canada have studied the effects of the conditions of storage on the stability of ascorbic acid in candy coated chewing gum, hard candy, orange concentrate tablets and in commercial jams. All of these maintain a fair degree of vitamin potency when subjected to controlled storage tests. Up to 75 degrees F. storage temperature, and relative humidity also in the range of 75% or more, the fortified sweets were satisfactory. The hard candies with added ascorbic acid seemed to be preferable to the natural concentrates of orange juice, although it is suggested that improved processing would make the natural concentrate tablets more desirable. 778

Technical Topics

BIOTIN — Biotin, found in egg white, tears, saliva and other secretions, with avidin, also in egg whites, etc., as a carrier, is a new clue to the action of lysozyme, a bacteria dissolving substance known to be present in egg white. 779

AIR STERILIZERS — Sprays consisting of hexyl-resorcinol in propylene glycol are proving effective in the sterilization of air. Hypochlorites and hypochlorous acid have also been used successfully. One gram of propylene glycol dispersed as vapor in 5 or 10 ml. of air and 1 gram of triethylene glycol vapor in several million ml. of air were found to kill pathogenic respiratory bacteria and the virus of influenza in air in seconds or minutes. 780

VANILLIN — The chemical vanilla, has been found present in amount 3.2 to 6.4% of tung nut shells. This is due to the high per cent of lignin in the shells. 781

RICE BRAN OIL — Interesting properties are planned in a new patent for rice bran oil particularly when sulphonated. Cosmetic uses are stressed. 782

N.D.G.A. — A new substance for preventing rancidity, already used by the armed forces for preserving fatty foods, is nordihydroguaiaretic acid called N.D.G.A. It is obtained from the Cresote bush Larrea Divaricata which grows in semi-arid regions of the United States. It is a white crystalline nontoxic substance. 783

OXIDATION OF PARAFFIN WAX — In a commentary on the work that has been done to produce fatty acids through oxidation of paraffin wax and similar fractions, the prediction was made that fatty oils synthesized from these fatty acids and glycerol may be made from protylene that are suitable for use in human food. 784

DENTAL-FILLING CEMENT POWDER — (Aluminum oxide, felspar, calcium fluoride, silica, zinc oxide, and manganese dioxide) which is set by mixing with a liquid (phosphoric acid, zinc oxide, zinc phosphite and aluminum phosphate) is improved by reinforcing with a 275-mesh powdered metal or alloy or mixtures (steel and palladium, stainless steel and silver, manganese and iron), according to a British patent. 785

IRON PRECIPITATION — Prevention of the precipitation of iron held in solution in water and the consequent discoloration of the water is claimed in an English patent to be achieved by the addition of a small proportion of a molecularly dehydrated alkali-metal phosphate. Sodium hexametaphosphate 1:1 relative to parts of iron per million prevents precipitation and reduces discoloration to a minimum; in the proportion of 4:1 all discoloration is prevented. 786

LITHARGE — Combined progressive melting and oxidizing of lead to form lead oxide (litharge) are the features of a recently reported English patent. A heated oxidizing gas, derived from one source is employed, to act upon the atomized lead particles as they pass through a conduit of such length that all the lead is burned in transit and the oxide is free from metal. 787

TECHNICAL SULPHURIC ACID—In 2% to 2.5% aqueous dilution is reported to be effective and less injurious than copperas, chlorate of soda, or calcium cyanide, as a weed-killer in onion seeding beds. 788

VITAMIN C IN BEVERAGES — D-isoascorbic acid will protect the vitamin C form, l-ascorbic acid, from oxidation in water solutions, because of its greater oxidation rate. Test solutions were buffered to pH 4 with secondary phosphate and citric acid, then bottled and pasteurized in a manner similar to the usual process for beverages. 789

EDIBLE LINSEED OIL — Canada does not produce many oil seeds except flax, so that attempts to produce an edible oil from the latter have been renewed during the present shortage. The disadvantage lies in the fact that when linseed oil is hydrogenated to an iodine value between 75 and 100, in the range of the usual commercial shortenings, there is a rapid development of an unpleasant flavor on heating. When it is hydrogenated beyond this point, to an iodine value of about 40, the flavor difficulty is overcome, but the product is too hard to be used as shortening, unless blended with a liquid oil such as cottonseed. Blends of linseed oil (about 25%) with cottonseed oil or with sunflower oil have been hydrogenated to a fairly satisfactory product. 790

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article — also name of the magazine you saw it in.

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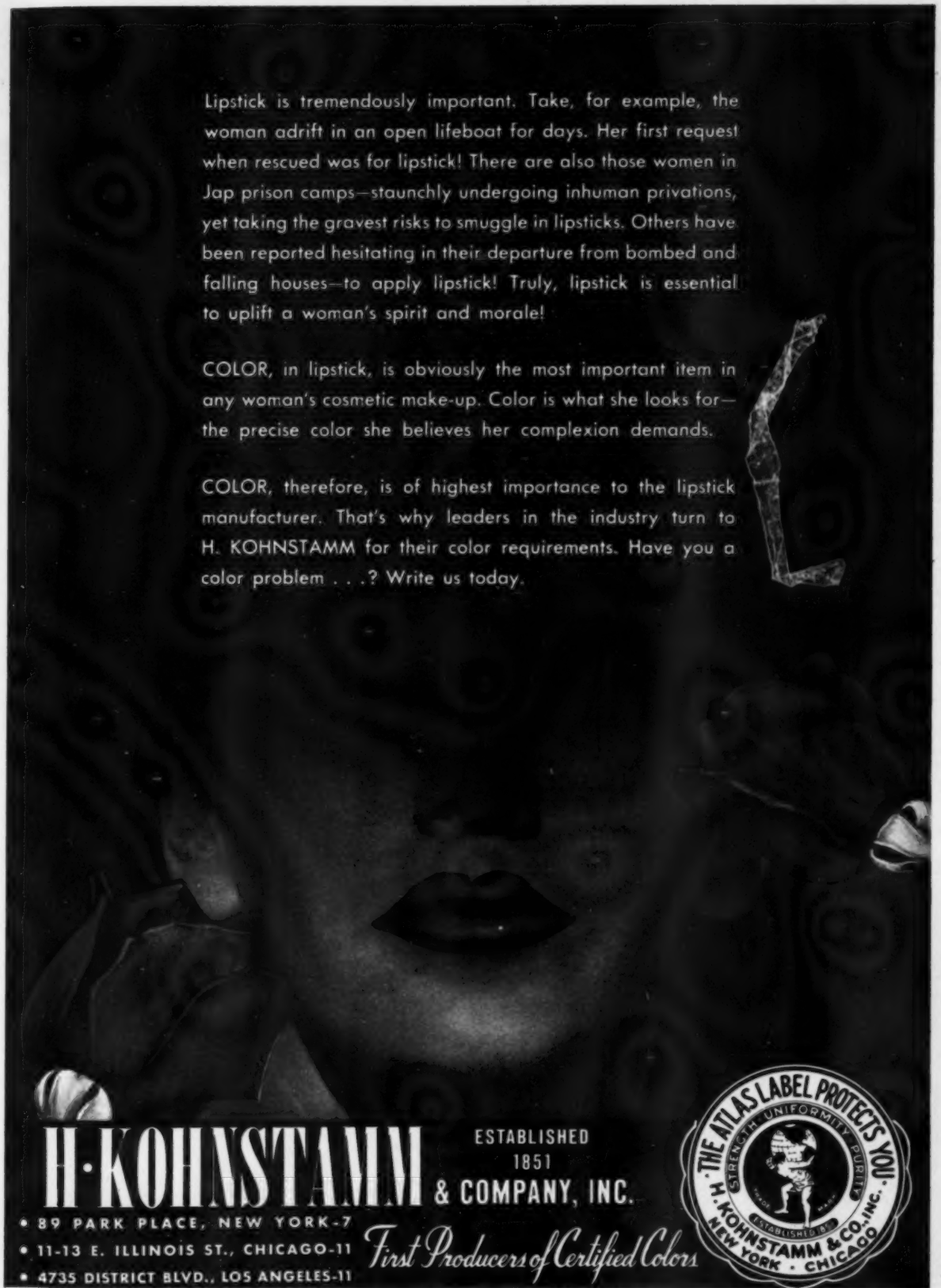
Lipstick is tremendously important. Take, for example, the woman adrift in an open lifeboat for days. Her first request when rescued was for lipstick! There are also those women in Jap prison camps—staunchly undergoing inhuman privations, yet taking the gravest risks to smuggle in lipsticks. Others have been reported hesitating in their departure from bombed and falling houses—to apply lipstick! Truly, lipstick is essential to uplift a woman's spirit and morale!
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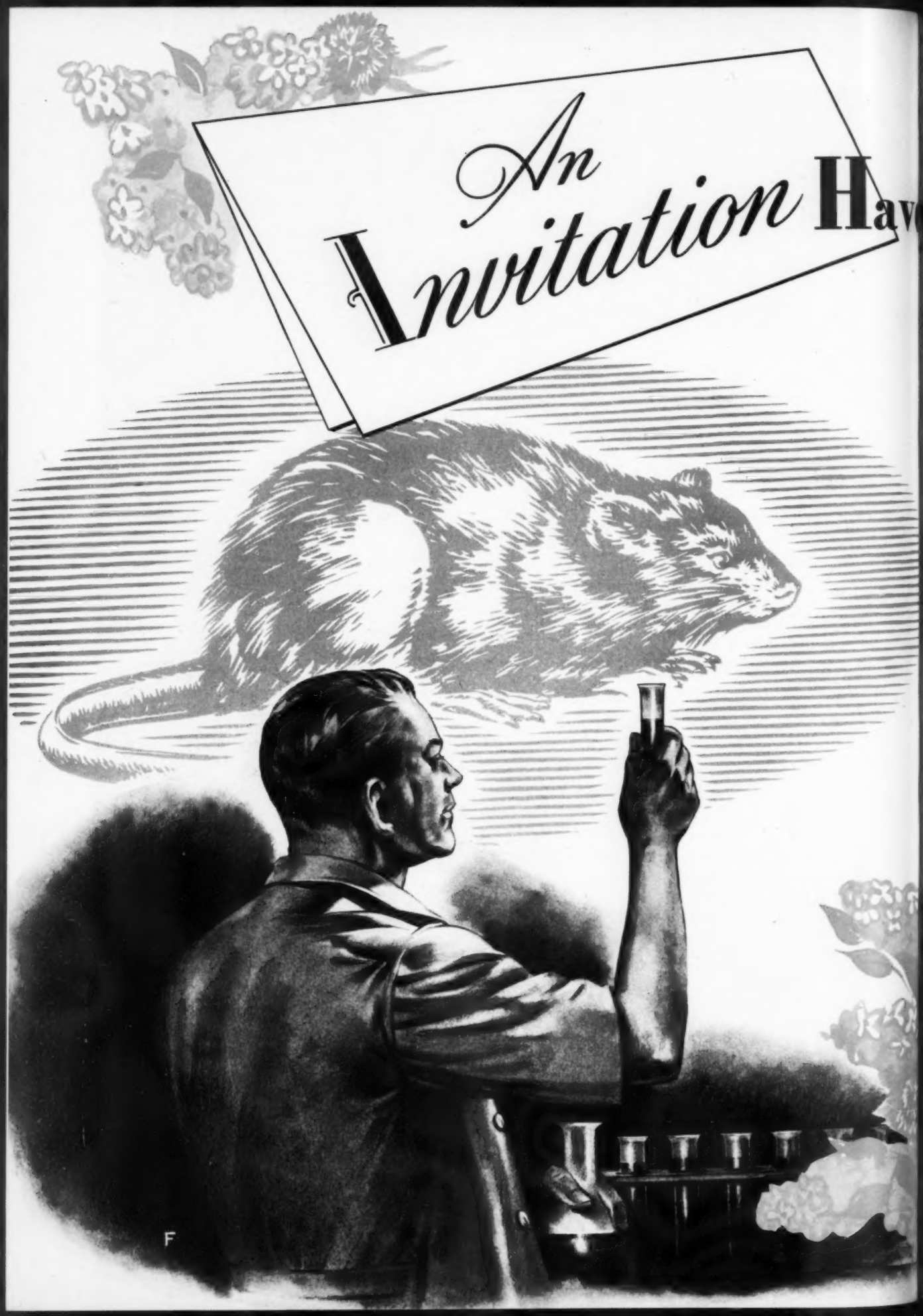
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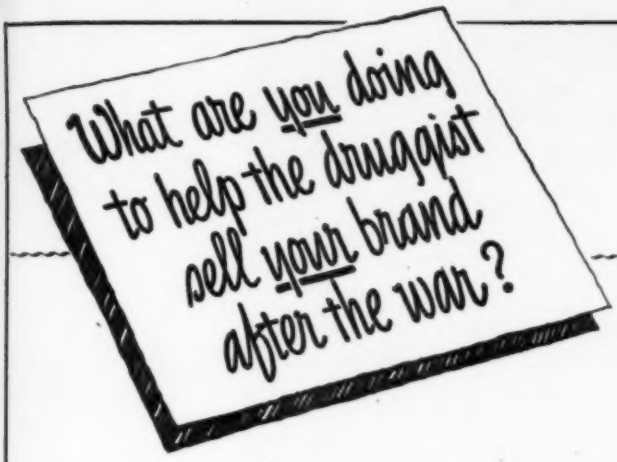

American Druggist

The day after V-Day

(AMERICAN DRUGGIST OCTOBER EDITORIAL)

On V-Day, when the word is flashed that Germany is through, the free people of every American community will have a sense of deliverance from evil. Many will celebrate in public places. Others, in private, will weep tears of gratitude . . . then tomorrow will come and with it the first day of the post war world.

The day after V-Day, retail druggists and their many competitors will return to their stores which will look just as they did the day before Hitler quit. But their future problems won't be the same. Retail druggists soon may notice the change.

Nearly all druggists have enjoyed good business during the past two or three years for the simple reason that war production has given the customers more money to spend than ever before, and gas rationing persuaded many to spend it in neighborhood stores. Furthermore, the druggist has had lower operating costs almost forced upon him because of the shortage of help, tires and gasoline. The increased volume of the wartime years, plus the opportunity to operate at less cost, has enabled many druggists to coast along. During this period, the wartime shortage of pharmacists has closed more drug stores than incompetence. For those lucky enough to stay in business it has been a pleasant and profitable free ride, but with the end of Hitler, the free ride is over.

Although Japan is still to be crushed, the war production necessary will not be enough to sustain the abnormal purchasing power now supporting retail sales.

Therefore, on the day after V-Day, thoughtful druggists will consider what they can do to maintain their present volume. They will appraise their assets, not only stocks and fixtures, but also their customer good will and local prestige as pharmacists. If they plan their future wisely, they will be aware of competition from non-drug outlets, but they will never forget that Pharmacy gives the drug store its only exclusive feature, i.e., the prescription department. Let us hope they protect it by promoting their stores as community health centers for a nation at peace.

John W. McFerrin

EDITOR

MASSAGE OILS

BURN TREATMENTS

OINTMENTS

TOOTH PASTES

QUALITY PHARMACEUTICALS

made better with

SONNEBORN

White Oils and Petrolatums

Leading pharmaceutical manufacturers have long standardized on SONNEBORN White Oils and Petrolatums . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients.

A few of the end-uses of successful products containing SONNEBORN White Oils or Petrolatums are illustrated. There are many others.

The broad research facilities of the SONNEBORN laboratories, backed by 64 years of refining experience, are available for aid in current production problems and in the development of new pharmaceuticals for postwar markets.

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BABY OILS

FOOT CREAMS

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BLANDOL U. S. P. Light
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PETROLATUMS U. S. P.

TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

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TYPE III: *Medium Consistency With High Melting Point —White Perfecta*

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SONO-JELL— Complete series for liquefying cleansing creams, pomades, ointments, etc.

DEO-BASE— Light hydrocarbon distillate refined to complete freedom from kerosene odor.

TRI-OL— Base for soapless oil shampoos and base for soap-sensitive skin cleansers.

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Branch Offices: Chicago, Baltimore, Philadelphia and Los Angeles

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Now available without government allocation

A new improved product—
in a new improved container

The new Dow Propylene Glycol, N.F., is now readily available . . . the recent elimination of allocation restrictions assures prompt fulfillment of your needs. Dow research and Dow-devised methods of production assure a pure product . . . the new Dow resin-insulated shipping containers protect that quality. Propylene Glycol is valuable as a combination preservative, plasticizer, softening and moistening agent, flavor vehicle, and chemical intermediate. It is a slightly viscous, clear and colorless liquid that is miscible with water, alcohol, acetone, chloroform and numerous other organic solvents. Test this Dow product for profitable application in your business.

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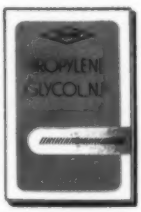

DETAILED INFORMATION that may suggest new economies and efficiencies in your business is contained in a special Dow Propylene Glycol booklet. Physical data, charts and technical specifications are included. Dow will be glad to send you a copy promptly upon request.

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Keep your product in character

One aim of Du Pont aromatic research is to help you in the delicate task of compounding distinctive odors. Your present problem may be to maintain a familiar fragrance with different bases and specialties than those of original formulas. Or you may contemplate a new product for which you seek an unusual, provocative scent. Du Pont research will help you in either important task. E. I. du Pont de Nemours & Co. (Inc.), Aromatics Section, Wilmington, Del.

du pont aromatics

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...THROUGH CHEMISTRY

DU PONT

happy ★

Johnson & Johnson
December 19, 1943

Mr. Stanley J. Klein, President
Empire Box Corporation
Garfield, New Jersey

Dear Stanley:

while in times like these. I imagine that it was a pretty tough decision to make as regards deciding whether to take the new customer at a better profit, when customers were to be had without asking, versus going along with the old customer and keeping him happy * for the post-war period. Obviously, I am tickled to death with your decision to take care of the old customer, and I want you to know that Bud has done a swell job.

Speaking as only one of the [illegible] fellows in my position, I dare take the prediction that your decision will reap unheard of benefits in the post-war period.

Sincerely yours,

Chicago Plant

R. J. Brown, Jr.
cp

ANOTHER CARTON-CUSTOMER IS HAPPY WITH EMPIRE'S SERVICE

Number 4 of a series of "war-time" letters from old customers—many of them leaders in their field.

For your own satisfaction, learn how Empire can *make you happy* in supplying folding cartons . . . Just drop a line, explaining your package needs.

Empire BOX CORPORATION

OFFICES: NEW YORK • CHICAGO • PHILADELPHIA • BOSTON • GARFIELD, N. J.
PLANTS: GARFIELD, N. J. • SOUTH BEND, IND. • STROUDSBURG, PA.

what's new... CHOLINE!

Are you giving consideration to this new member of the vitamin B complex?

This new vitamin is currently the subject of much clinical research, and is rapidly gaining recognition. Recent clinical experiments with choline show promise in the alleviation of cirrhosis of the liver.

Results with experimental animals indicate that a dietary deficiency of choline produces various pathological symptoms, including fatty and cirrhotic livers, hemorrhagic kidneys and bone deformities.

Other potential uses of choline are outlined, in detail, in Calco technical literature . . . which is available upon request.

Choline is offered by Calco in two forms: (1) CHOLINE CHLORIDE, which is the most commonly used salt of choline; and (2) CHOLINE DIHYDROGEN CITRATE, which is a more recently developed form developed by Calco for pharmaceutical use.

CHOLINE DIHYDROGEN CITRATE has a pleasantly acid taste and is somewhat less hygroscopic than the chloride, consequently it is more suitable for use in pharmaceutical preparations.

New Products

Choline Chloride
Choline Dihydrogen Citrate

★

Ask, Also, About These Other Available CALCO Products

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Nicotinamide U.S.P.
Sulfanilamide U.S.P.
Cinchophen N.F.
Neocinchophen U.S.P.
Sulfathiazole U.S.P. (and Sodium Monohydrate)
Mandelic Acid U.S.P.
Methylene Blue U.S.P. (Powder-Crystals)
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ARMY E NAVY

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CALCO CHEMICAL DIVISION
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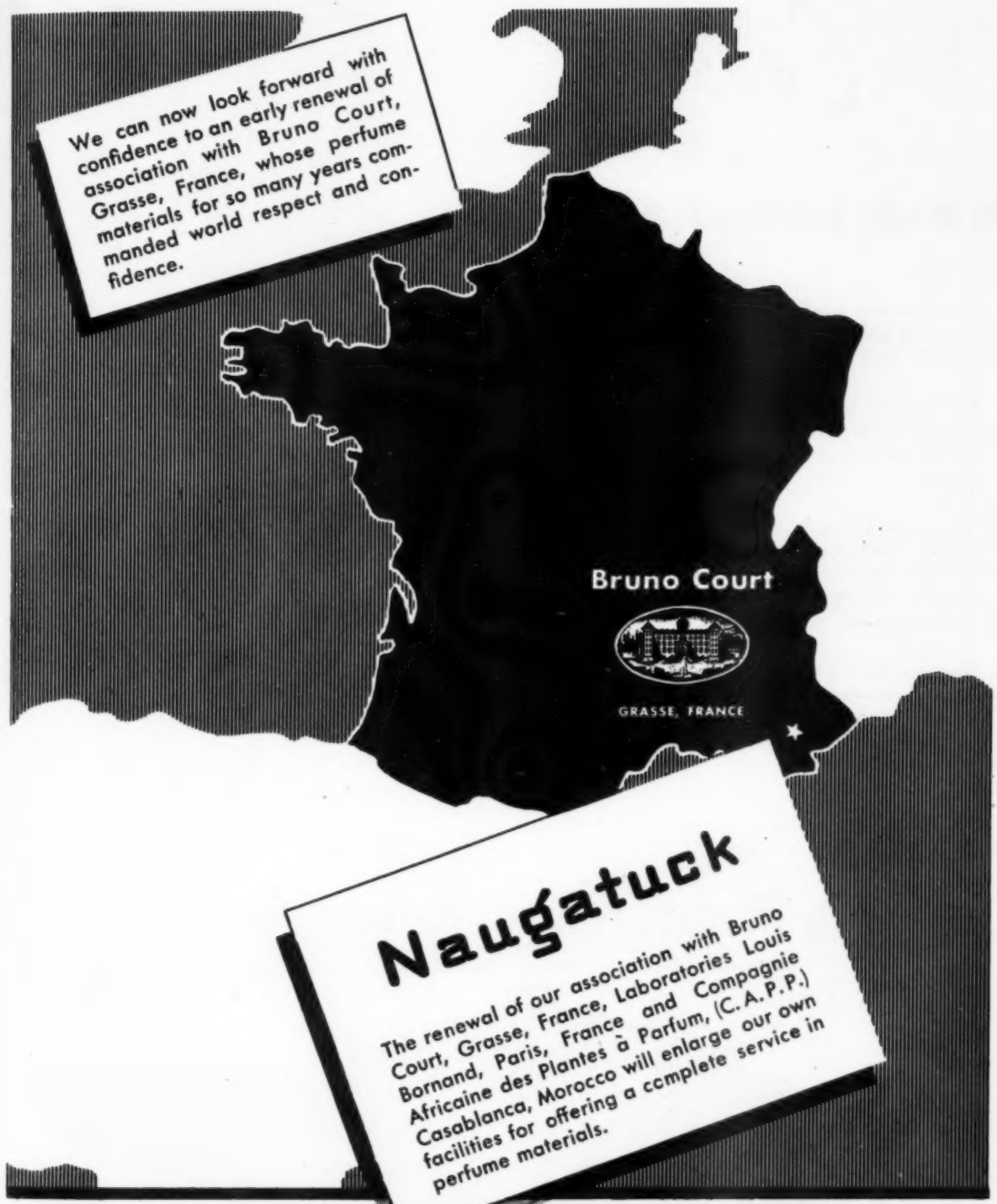
We can now look forward with confidence to an early renewal of association with Bruno Court, Grasse, France, whose perfume materials for so many years commanded world respect and confidence.
Bruno Court
GRASSE, FRANCE
Naugatuck
The renewal of our association with Bruno Court, Grasse, France, Laboratories Louis Bornand, Paris, France and Compagnie Africaine des Plantes à Parfum, (C.A.P.P.) Casablanca, Morocco will enlarge our own facilities for offering a complete service in perfume materials.

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Sole Representatives for: BRUNO COURT, S. A., GRASSE, FRANCE C. A. P. P., CASABLANCA, MOROCCO

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When Japanese aggression created an immediate need for a Cassia Oil replacement, MM&R researches produced Imitation Oil Cassia MM&R with Aladdin-like dispatch.

This product has proved its value and efficacy . . . will continue to be used by many economy-minded manufacturers when Allied victory makes genuine Cassia available again.

Because of the vastly increased demand for Imitation Oil Cassia MM&R, production economies permit lower price schedules. So that you may experiment on a commercial basis, an opportunity is offered to purchase five pounds at the 1000 pound price.

Use Imitation Oil Cassia MM&R exactly (pound for pound) as Oil Cassia Redistilled USP. The results will furnish the reasons for the ever-increasing popularity of this scientifically-manufactured MM&R replacement.

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SINCE 1895...ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

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TEGIN — Glyceryl Monostearate — Self emulsifying. For neutral greaseless creams, lotions and ointments.

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MESSAGE

on the wing--

Unfalteringly the Army carrier pigeon wings its way toward a destination. Training plus instinct make him an important factor in the war. Long training plus artistic instinct are also the joint essentials in creating the superb fragrances for which our perfume-chemists are noted.

VAN **AMERINGEN-HAEBLER,** INC. • 315 FOURTH AVENUE • NEW YORK 10, N. Y.

Back ON THE JOB *Again!*

At the end of this present war the biggest problem for us will be to keep *men working.* To keep plants busy. To keep our industry in a healthy condition.

Everything which can be done now to prepare for that time will aid us in solving the problem then.

Our organization, through research and earnest effort to extend the best possible service to our customers at the present time, is preparing now for the reconstruction period which will surely come later.

The Finest in Aromatic Chemicals and Essential Oils.

Aromatics Division
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AN UNSOLVED DISPERSION OR EMULSION PROBLEM?

Tell us what it is and let's see if we can solve it for you. Although young in business years we are old in experience and "know how". This advertisement has been prompted by surprising success (as often to ourselves as to our clients) in licking "knotty" or "can't be done" problems for some of the best names in the drug and cosmetic industries.

We are not miracle performers, but we appear to be sufficiently successful to warrant the suggestion that you ask us to go to work for you. The chances are that we have or can make for you the particular surface active, dispersing agent, emulsifier or combination you need to give the results wanted and hoped for but never quite attained.

Simply tell us your basic problem which will be treated most confidentially, put it up to us to find the answer for you. No obligation is involved in taking advantage of this offer.

THE DISPERGENT CO.

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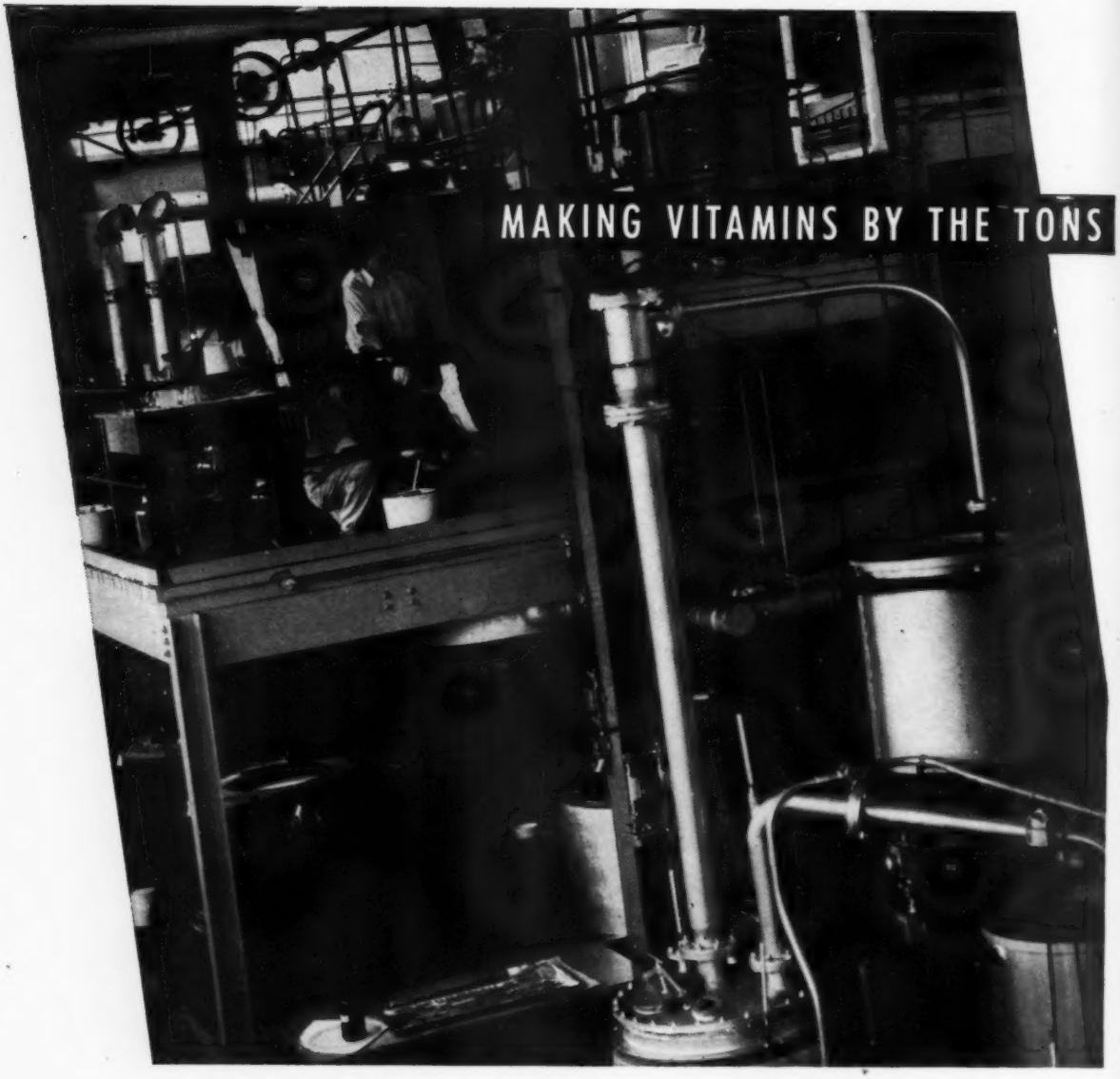
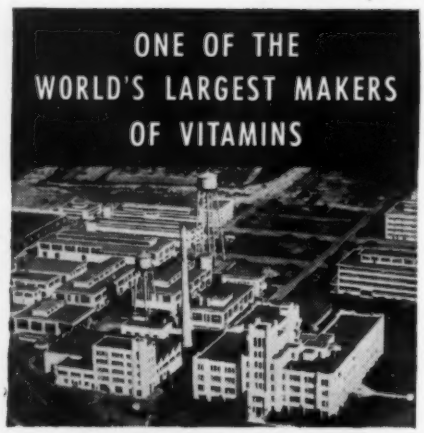
SPECIALISTS IN CUSTOM BUILT EMULSIFIERS, DISPERSING AND SURFACE ACTIVE AGENTS



EASIER VITAMIN ORDERING



IMMEDIATE B_1 SHIPMENTS can now be made to customers whose monthly orders total 2,000 grams or less, and no certificate of use is required.

NO MORE WPB-2945 forms are required from users of larger quantities of thiamine; instead we apply to WPB for you. Simply get your purchase order to us by the 15th of the month for the B_1 you want the following month, affixing a use certificate.

RIBOFLAVIN is off allocation entirely.

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If at all in doubt as to procedure for obtaining vitamins still on allocation, contact our Vitamin Division. And *whenever* you order vitamins—B_1, B_2, B_6, C or E—specify 'Roche' and rest assured of getting the finest science can produce, in the most desirable forms, at the lowest prices consistent with uncompromising quality.

HOFFMANN-LA ROCHE, INC. VITAMIN DIVISION • NUTLEY 10, NEW JERSEY

INDOLINE

Not a substitute for INDOL but a product superior in

LASTING QUALITY
SWEETNESS and
PERFUME VALUE

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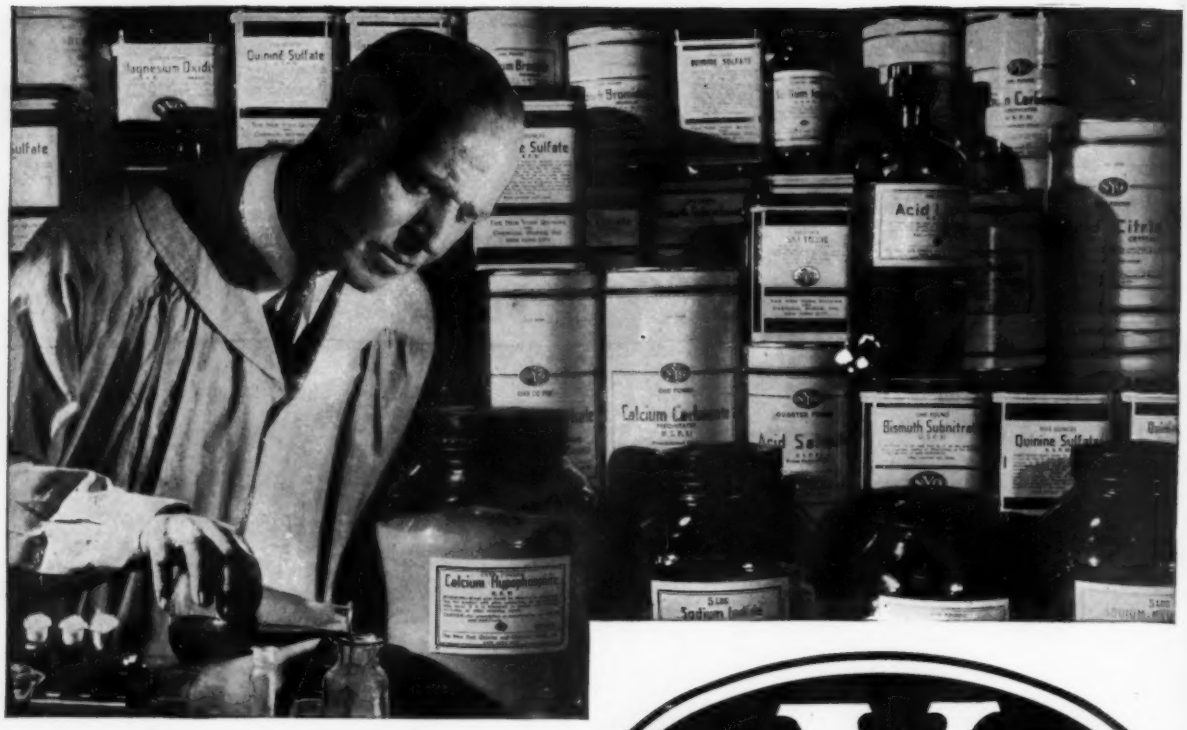
135 COMMISSIONERS ST., WEST, MONTREAL
ENGLAND: 17 CREECHURCH LANE, LEADENHALL ST., LONDON, E. C. 3



Man-Hours of RESEARCH...

...Do you realize how many man-hours of research are spent in the constant improvement of N. Y. Q. products?

NYQ

Symbol of Quality

NYQ

MANUFACTURERS OF

- Bismuth Subcarbonate
- Bismuth Subgallate
- Bismuth Subnitrate and other Bismuth Salts
- Brucine Alkaloid
- Brucine Sulfate
- All Salts of Cinchona Alkaloids
- Iodine Resublimed
- Iodoform
- Potassium Iodide *(Cryst.-Gran.-Powd.)*
- Quinine Sulfate and other Quinine Salts
- Strychnine Alkaloid
- Strychnine Sulfate
- Thymol Iodide

Hour after hour—day after day—month after month—research is being carried on in the laboratories of N.Y.Q. for the improvement of our products—to assure highest quality and to control manufacture from raw materials into finished substances. That is why so many satisfied customers have confidence in products carrying the N.Y.Q. label.

ARMY NAVY E

GENERAL OFFICES
99-117 NORTH ELEVENTH STREET, BROOKLYN, NEW YORK
ST. LOUIS DEPOT • 915 MARKET STREET, ST. LOUIS, MO.

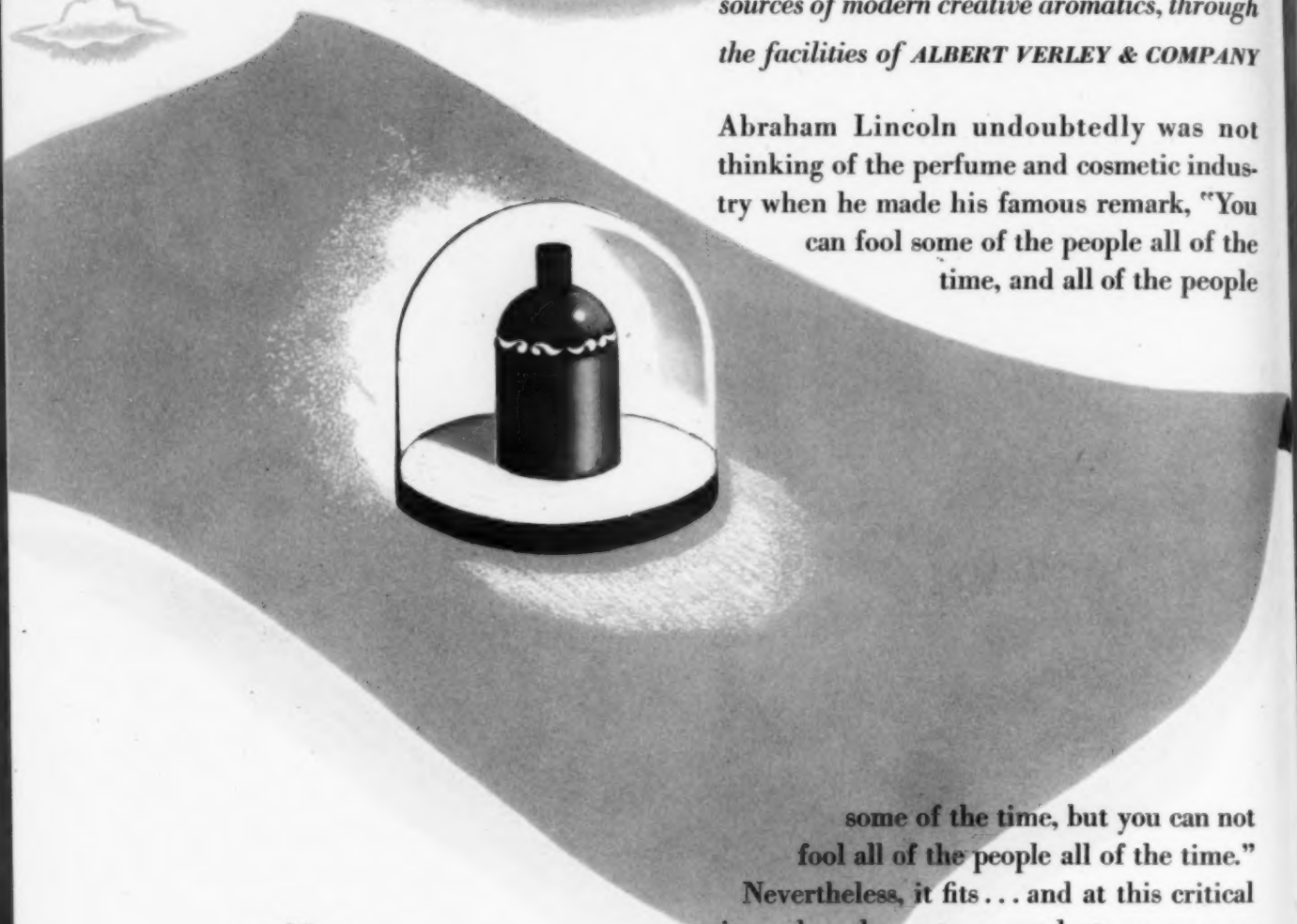
The NYQ label carries with it sixty-seven years of experience

The Odor IS THE SOUL OF YOUR PRODUCT

—for the new post-war world... Let ALBERT **Verley** & COMPANY
help you give it a genuine, lasting appeal
—through MODERN CREATIVE AROMATICS

TURN THE PAGE

Your ultra-modern packaging and presentation is more than an empty husk**—when you draw upon the resources of modern creative aromatics, through the facilities of* ***ALBERT VERLEY & COMPANY



Abraham Lincoln undoubtedly was not thinking of the perfume and cosmetic industry when he made his famous remark, "You can fool some of the people all of the time, and all of the people some of the time, but you can not fool all of the people all of the time."

Nevertheless, it fits . . . and at this critical time, when the post-war products we are now planning will make or break the future of America in the world's markets, it deserves serious thought.

America already is famous for originality, beauty, and selling effectiveness in packaging and merchandising. The challenge now is, "Can you make good on your presentation . . . can you deliver the goods?"

During ten long pre-war years, Albert Verley & Company was preparing to help you meet this challenge, by transferring European lore to this side of the Atlantic. We are ready now with aromatic creations, specialties, and creative suggestions for odors with that essential quality of leadership—the ability to win *lasting* admiration.

Let us confer with you. Call or write today.

ALBERT
Verley
& COMPANY

232 EAST OHIO STREET, CHICAGO 11, ILLINOIS
114 EAST 25TH STREET, NEW YORK 10
MEFFORD CHEMICAL CO., LOS ANGELES

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this baby sold them nothing but talk!

It was a lead-pipe cinch! By the time they found out they'd been tricked he was in the next county.

But if you're doing business at the same stand, as we are, your products must perform, as ours do.

Martin's depilatory powders are odorless, safe and complete the hair removal in four minutes. They're ready for positive results with just the addition of water. They may be used with full confidence on hands, legs or face.

Martin's complete, packaged, cold wave lotion is ready for your own private label. Certainly it contains the genuine Tyo ingredient.

Write us for further information.

MARTIN *Laboratories*

251-255 East 139th Street
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Four plants in New York and New Jersey

Makers of TYO

schimmel

for

synthetic musks

Animaline W

This compound crystalline aromatic possesses the valuable animal note of genuine musk. Contrary to other artificial musks, it possesses no unpleasant by-odor. It is easily soluble in benzyl benzoate and similar solvents, as well as alcohol, essential oils, and most aromatics.

Muscaro W

Completely captures the faculty of musk of merging, intensifying, and leveling off the ingredients of a perfume. Used in combination with Musk Xylol, Ambrette, and Ketone, it imparts to them the Tonkin effect not present in ordinary musk substitutes. Easily soluble.

Write us on your firm's letterhead for samples and further information.

SCHIMMEL & CO., INC.
601 WEST 26TH STREET
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Bank Credit TRAVELS to meet your Inventory!

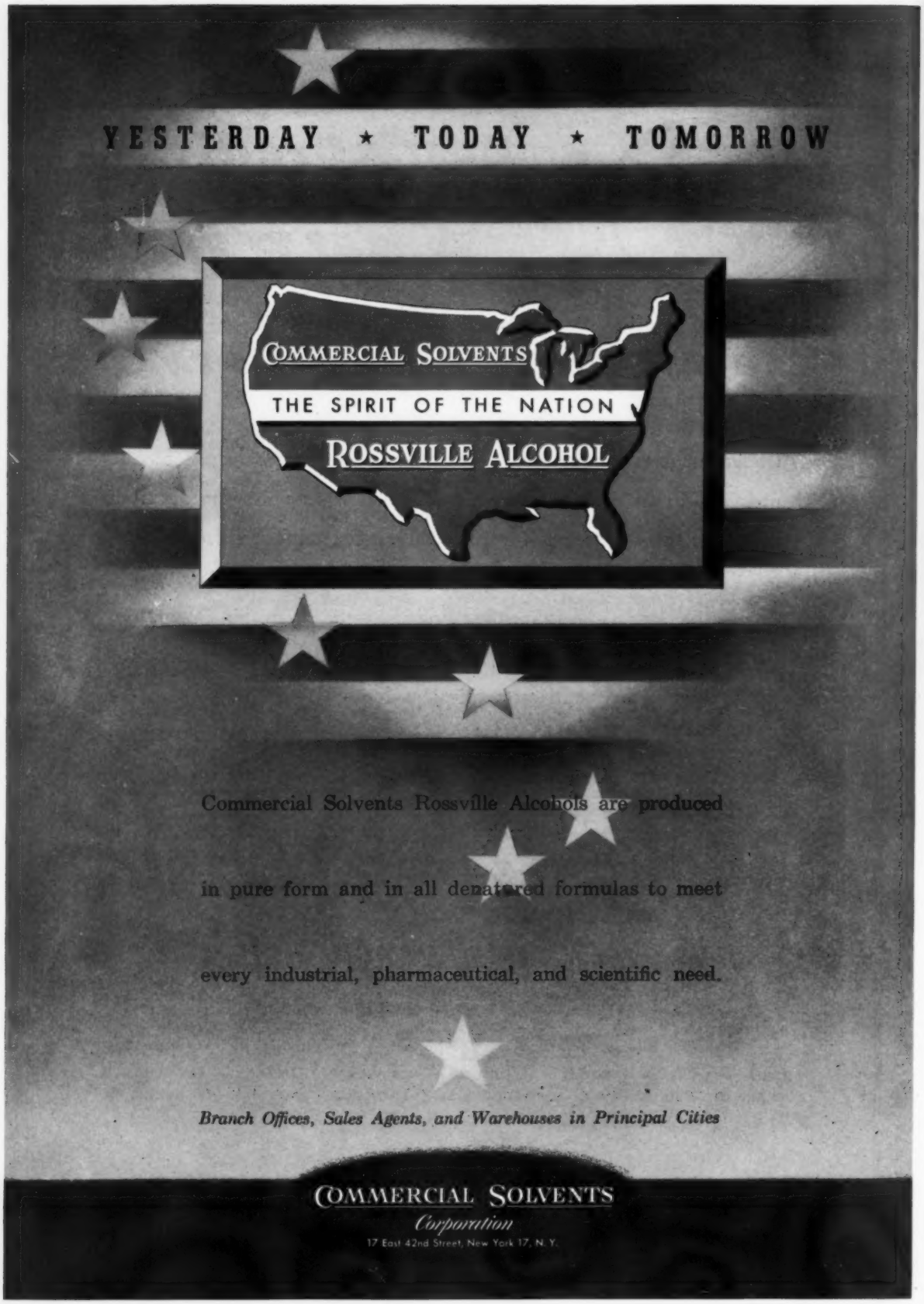
Under Douglas-Guardian field warehousing, inventory right on your own premises—drugs, chemicals, cosmetics, raw materials or finished merchandise, packages or containers—may be used as collateral for bank loans.

When you want to raise funds on your inventory—*without moving it*—consult a Douglas-Guardian operating man—the key man in Douglas-Guardian procedure. He will explain how to handle your particular transaction quickly and economically; demonstrate how Douglas-Guardian warehouse receipts bring the banker to your doorstep and bank credit to your inventory.

DOUGLAS-GUARDIAN
WAREHOUSE CORPORATION
Nation-Wide FIELD WAREHOUSING

New Orleans (1): 118 North Front Street • Chicago (3): 100 West Monroe Street
New York City (4): 50 Broad Street

ATLANTA • CLEVELAND • DALLAS • EASTON, MD. • LOS ANGELES • MEMPHIS • SAN FRANCISCO
PORTLAND, ORE. • ROCHESTER, N.Y. • SPRINGFIELD, MASS. • PHILADELPHIA • TAMPA, FLA. • SPRINGFIELD, MO.


YESTERDAY ★ TODAY ★ TOMORROW
COMMERCIAL SOLVENTS
THE SPIRIT OF THE NATION
ROSSVILLE ALCOHOL
Commercial Solvents Rossville Alcohols are produced
in pure form and in all denatured formulas to meet
every industrial, pharmaceutical, and scientific need.
Branch Offices, Sales Agents, and Warehouses in Principal Cities
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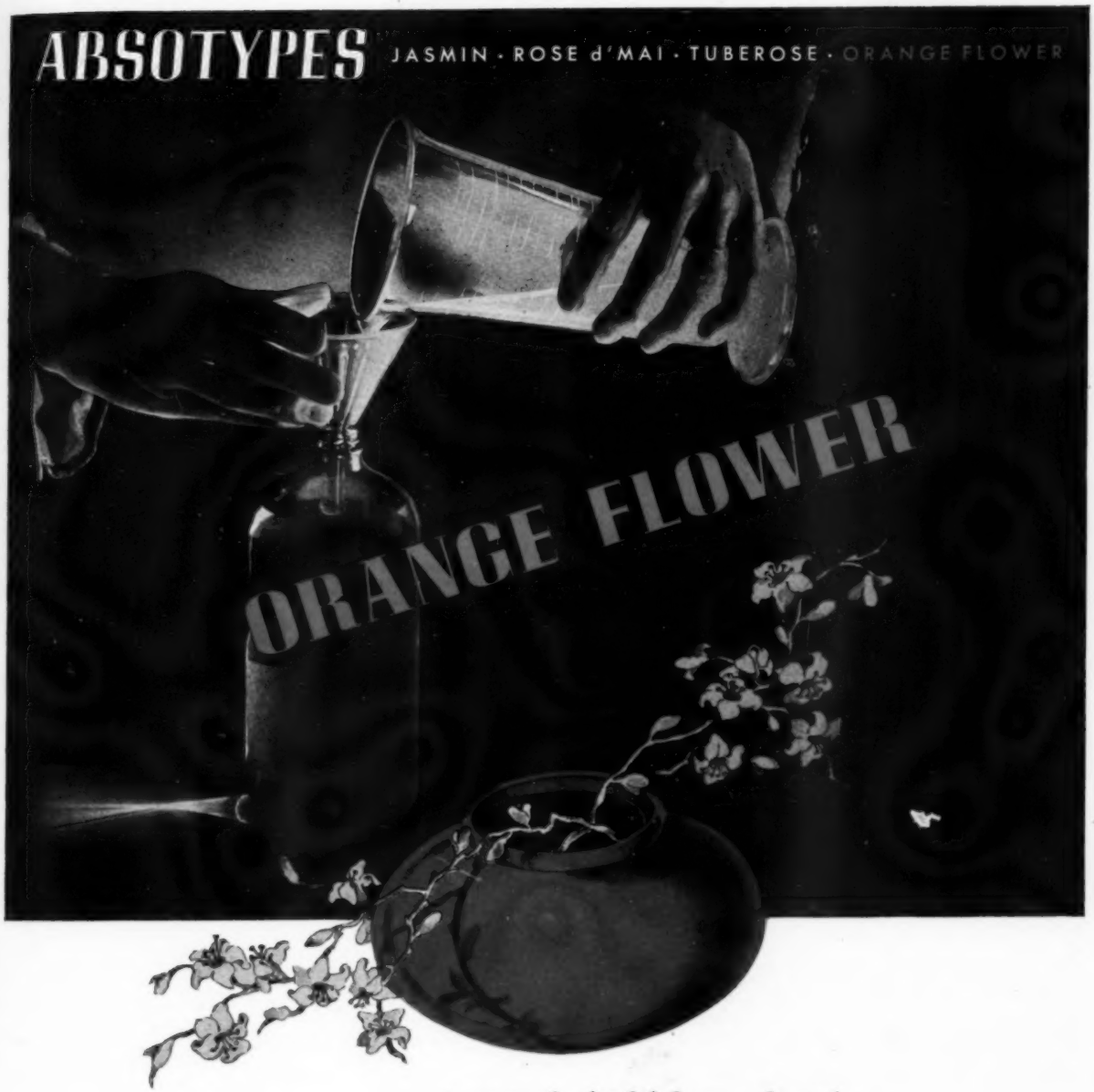

Amazingly faithful reproduction of the floral absolute that has established Florasynth ABSOTYPES as a distinctive family of primary essentials in the creation of superior perfumes and toiletries.

One ounce Trial Sample $10.00

Florasynth LABORATORIES, INC.

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Magnolia BELLE

Delicate... Winsome...
Magnetic... a charming influence in
perfumes and perfumed products...

AROMATICS · ESSENTIAL OILS
PERFUMERS' MATERIALS

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The Orange Oil With Freshest Flavor And Truest Aroma!

Orange Oil is *our* business, and EXCHANGE Brand is your assurance of matchless *flavor*, *freshness*, and *uniformity* — your benefit of over 20 years of our experience in satisfying the requirements of American users.

Ask our Jobbers for Samples

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Producing Plant:
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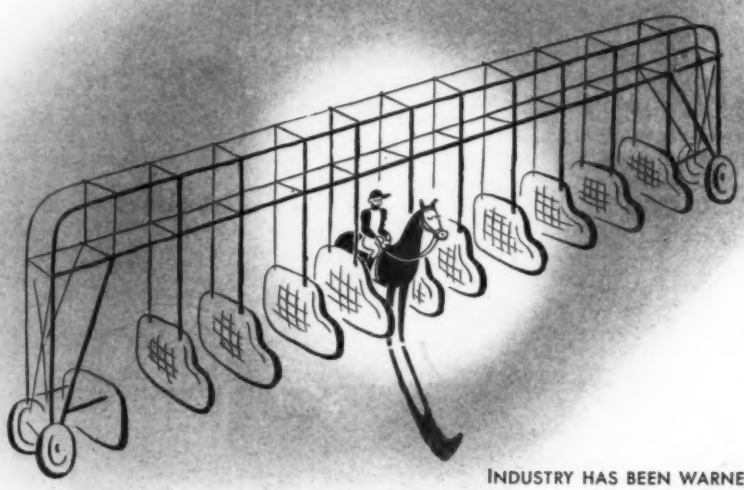
Exchange
OIL OF
ORANGE
U. S. P.

DON'T BE LEFT AT THE POST-WAR PLANNING



INDUSTRY HAS BEEN WARNED by Jesse Jones, U. S. Secretary of Commerce, that the war may end suddenly and business should, therefore, be preparing now for the Post-war period.

The Committee for Economic Development reports that cessation of hostilities in Europe will release 80% of the nation's war production capacity for reconversion for civilian use.

Mr. Jones' warning and the report of the Committee for Economic Development should serve as a double spur to all Post-war thinking. When restrictions are lifted from war-prioritied cosmetic ingredients, don't be caught flat-footed and left at the post.

The merchandising, packaging and production experience and facilities of Allied Products may be a source of guidance at this time for the all-important, fast get-away and quick sales pick-up when war production barriers are raised. Arrangements for consultation can be made at your convenience, and without obligation, at your office or at the Allied Office in the R.C.A. Building in New York City.

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Five Hooker Chlorides anxious to give up their Chlorine

Here are five Hooker Chlorides that are being widely used in chlorinating reactions. Their application is so widespread that we can only touch briefly here on a few of their uses in organic synthesis.

Sulfuryl Chloride, SO_2Cl_2, is commonly used to form organic acid chlorides. It may be used to produce chlor derivatives of phenols and in the presence of certain catalysts to produce chlor derivatives of hydrocarbons or the sulfonyl chlorides of hydrocarbons.

Thionyl Chloride, $SOCl_2$, available in a high degree of purity is a popular chlorinating agent because by-products of its reactions are sulfur dioxide and hydrogen chloride, gases readily removed by heating. It reacts with organic acids to form either acid chlorides or anhydrides depending upon ratio of acid to Thionyl Chloride.

Sulfur Dichloride, SCl_2, is used as a chlorinating agent and in these reactions may be considered the equivalent of chlorine dissolved in sulfur monochloride. It reacts with sodium salts of organic acids to produce acid anhydrides.

Sulfur Monochloride, S_2Cl_2, and ***Sulfur Dichloride,*** SCl_2, are used in metallurgy to chloridize sulfide ores. They react with unsaturated hydrocarbons introducing sulfur or chlorine, or both into the molecule. Unsaturated fatty acids are treated with these chlorides to produce cutting oil bases. They also find extensive use in the manufacture of dye intermediates, rubber substitutes, military gases, insecticides, and pharmaceuticals. The sulfur chlorides which have a ready source of chlorine are ideal chlorinating agents with the added advantages of ease of handling and storage and of low cost.

Phosgene (Carbonyl Chloride), $COCl_2$, is the acid chloride of carbonic acid. With alcohols it forms either chlorformates or carbonates. With amines it forms chloramides, substituted ureas or isocyanates. It enters into many Friedel-Crafts syntheses to produce aromatic acids or ketones. It may also act as an agent for direct chlorination. With metallic oxides and sulfides, it gives anhydrous chlorides. Reacting with organic acids it has been used to make acid chlorides and anhydrides.

Bulletin No. 328A, a technical discussion on Hooker Chlorinating Agents gives more information on these chlorides and is available upon request. Our technical staff is also at your service in helping to solve problems involving the introduction of chlorine into organic chemicals or in the application of any of the many Hooker chemicals.

PHYSICAL DATA

	Sulfuryl Chloride	Thionyl Chloride	Sulfur Dichloride	Sulfur Monochloride	Phosgene
Formula	SO_2Cl_2	$SOCl_2$	SCl_2	S_2Cl_2	$COCl_2$
Molecular Weight	135	119	103	135	98.9
Description	Light yellow liquid	Pale yellow to red liquid	Dark brown or reddish liquid	Yellow to slightly reddish liquid	Colorless gas or light yellow liquid under pressure
Freezing Point	Below-54°C	Below-75°C	-78°C	-80°C	-126°C
Boiling Point or Range	68° to 70°C	Technical Grade 72° to 79°C Refined Grade 75° to 78°C	Decomposes above 40°C	138°C	8.2°C
Specific Gravity at 15.5°C	1.667 ±.005	1.640 ±.005	1.638 ±.005	1.690 ±.005	1.392
Analysis	Over 99% by weight SO_2Cl_2	Technical Grade 93.0% by wt. $SOCl_2$ Refined Grade 96.0% by wt. $SOCl_2$	Minimum Cl_2 by wt. 66%	Minimum Cl_2 by wt. 50%	Shows no free Cl_2 when bubbled for one minute thru 0.1% K. I. Solution

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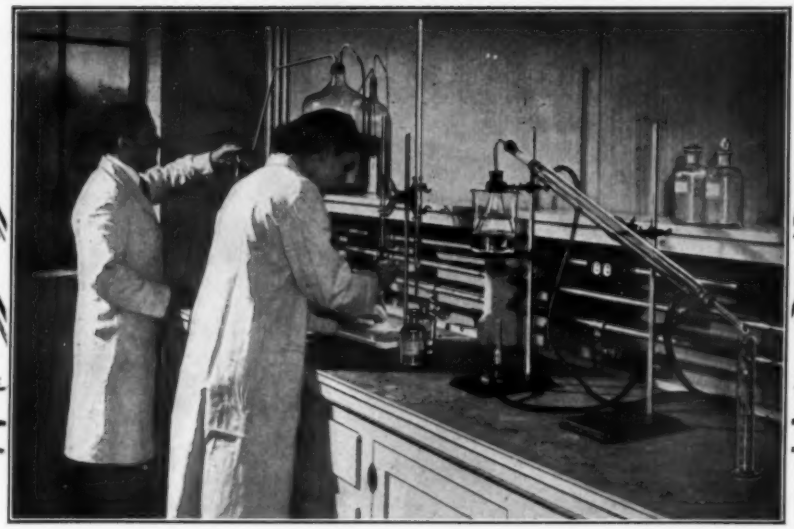

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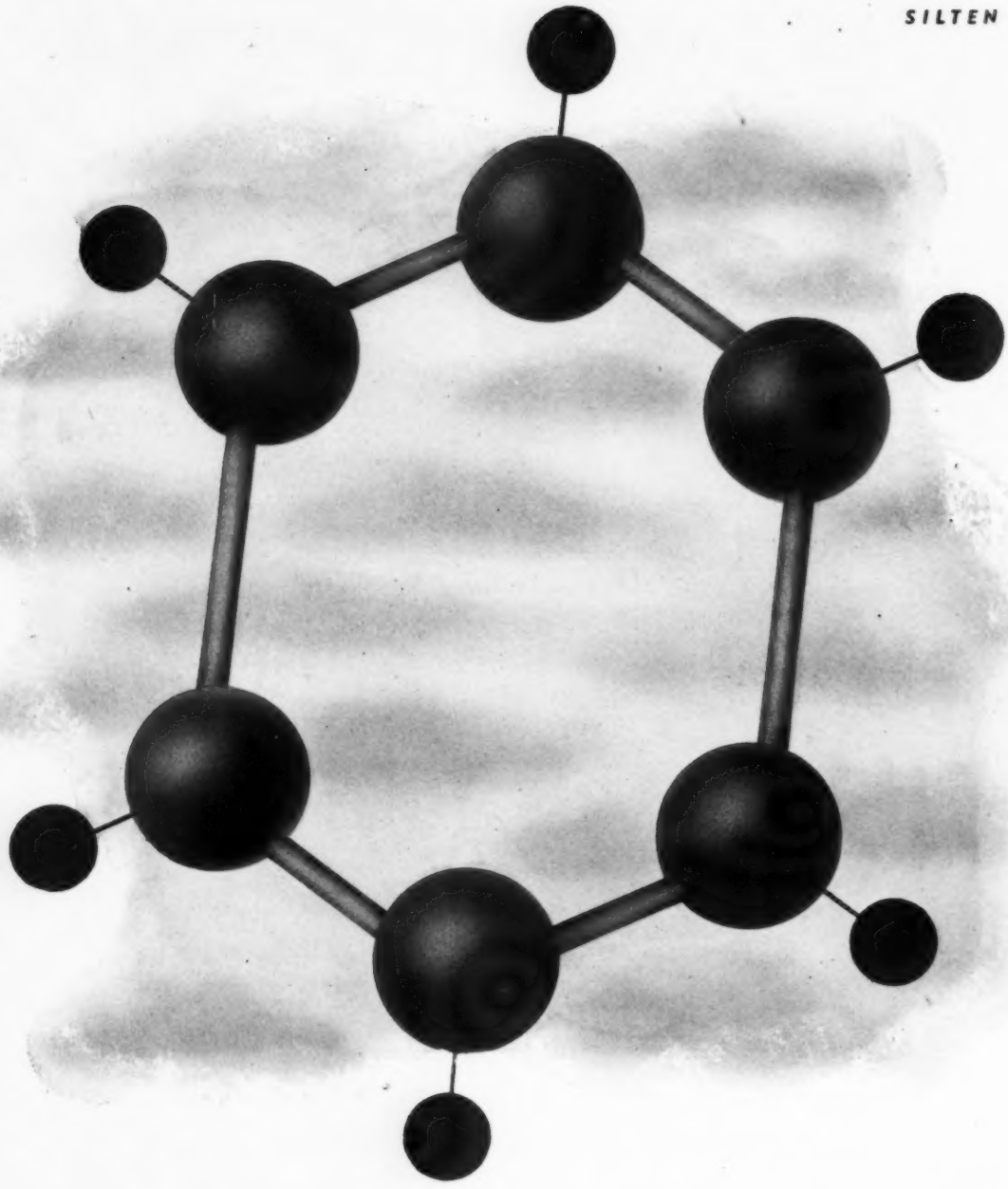

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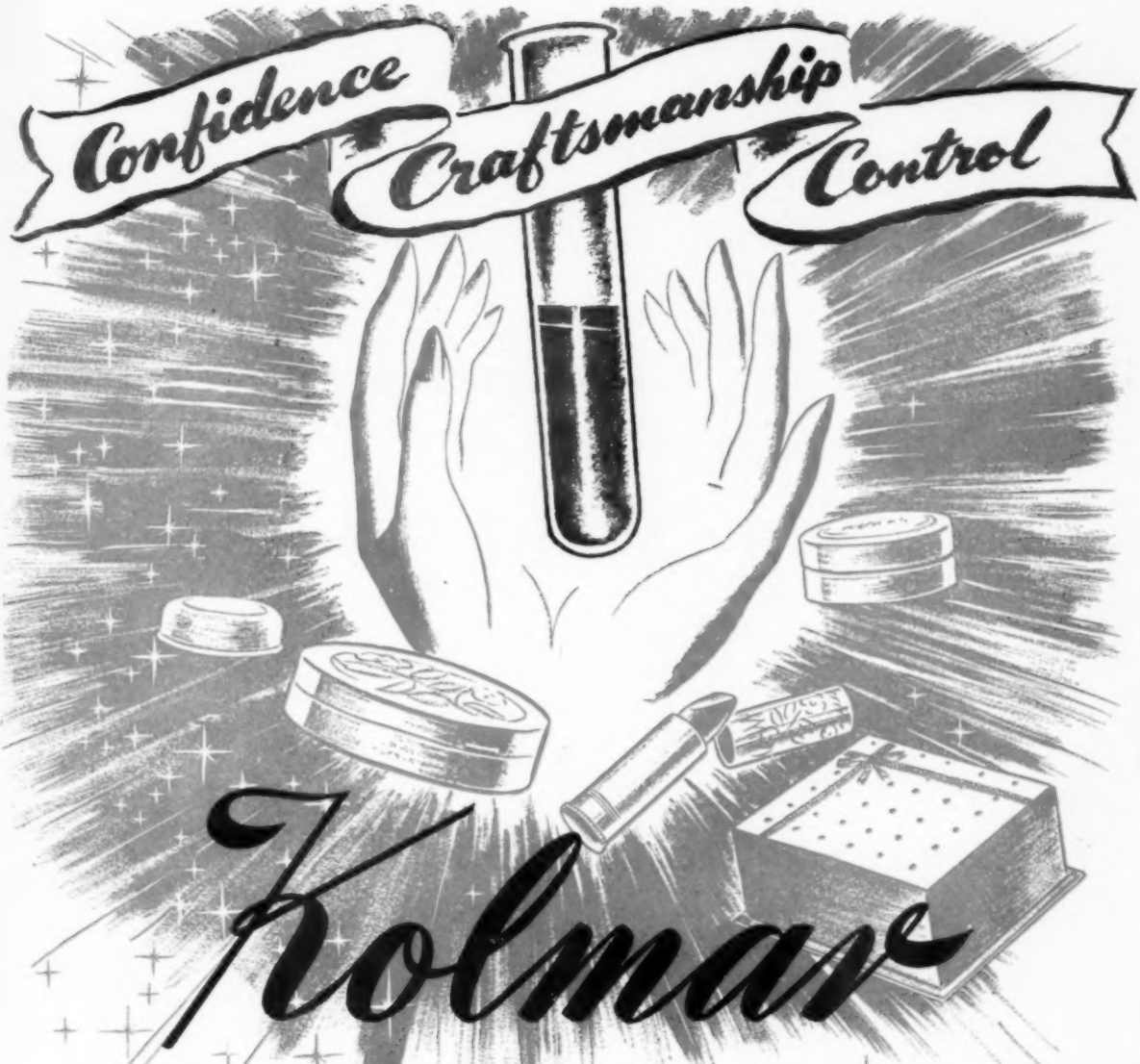

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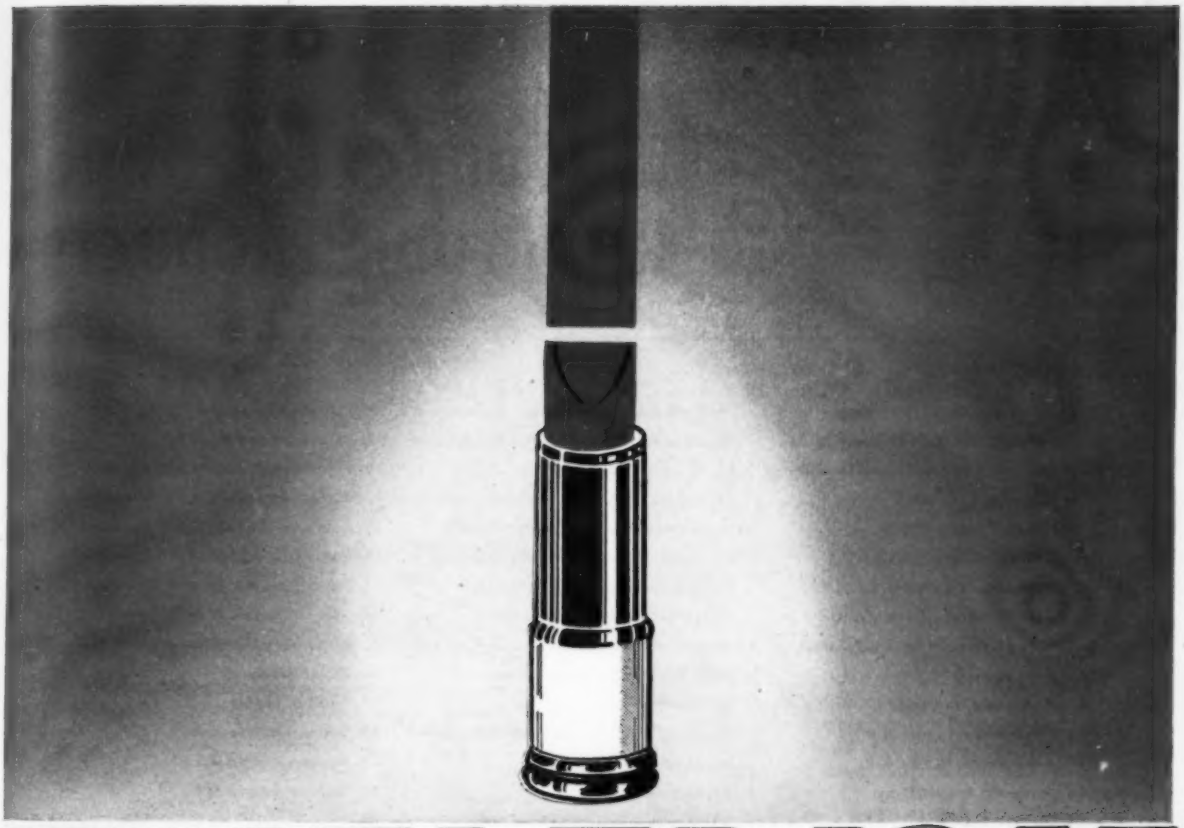

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KEEPING POSTED

Unionizing Drug Salesmen

ORGANIZING of salesmen of drug and pharmaceutical manufacturers in a union of the CIO has been going on for some time. At the present time the salesmen of four companies are known to be organized into this union. These companies are Norwich Pharmacal Company, Frederick S. Stearns & Company, American Druggists Syndicate, and Pure-Pac. The dues are reported to be 65 cents per week. The union is reported to be working on the organization of the salesmen of Squibb at the present time. In the case of Norwich, only commission salesmen are included in the union, while in the case of Stearns all salesmen and detail men are included. The approach to the salesmen is said to be an assurance of security in the post-war period, and it is admitted that the union organizers are excellent salesmen. A salesman who received between $11,000 and $12,000 in commissions last year is said to have joined the union. It is also said that the union first successfully organized the salesmen of the three companies paying salesmen the highest compensation of any houses in the industry. This should make it easy for the union to organize salesmen of other companies since they can promise these other salesmen that they will make the compensation of the highest paid houses in the union the minimum. How successful the union will be in organizing the salesmen of Squibb or other manufacturers remains to be seen, but cosmetic companies and wholesalers are already asking if they are going to be next. The demands of the union in one case included the check-off and the closed shop among other things. We do not know what they got. However, the closed shop would mean that if you replaced a salesman you would have to take a man supplied by the union which would mean that you would have to take a man who had formerly sold for a competitor. How the union is going to assure all the salesmen continuance of their jobs if times become bad is beyond us. Also we fail to see how the union is going to assure salesmen continuance of their jobs when some of these salesmen replaced men who went into the Armed Forces and the Federal law requires that the men returning from the Armed Forces be employed in some capacity at the same salaries that they were getting when they left.

World Cosmetics in Post-War

THERE is a form of lend-lease going on in this country which will have a real post-war effect. It is particularly noticeable in the cosmetic industry where many chemists from abroad have secured employment or have started their own small businesses. These men say that American equipment is a revelation to them. It is the full explanation why American lipsticks, nail lacquer, creams, powders, and other cosmetics have been so superior to the European products. In Europe the chemist could obtain neither the materials—colors, for instance—nor the equipment to process the cosmetic to approach our quality, even though as a chemist, he had equal ability and technical knowledge. Some of these men are planning to return to their native European countries with a big vision of using American equipment and methods of production after the war. Whatever happens, we can be sure that the easy superiority of American cosmetics in many other countries is in for stiff new competition.

Revival of Old Remedies

THE shades of ancient medicos must be highly interested in some of our new research. Quite a while before Pliny, 2,000 years ago, garlic and onions were used medicinally. Both the Greeks and the Romans thought highly of garlic and onions not only to restore health, but to maintain it. It is said that the slaves who built the pyramids for Cheops were fed garlic as a conditioner. Long forgotten as medicines, we now find the Russian scientists demonstrating the value of these vegetables.

Cato, in the second century B. C., recommended mashed cabbage as a treatment for healing bruises. Now at Geneva, N. Y., bacteriologists discover the germicidal properties of cabbage juice. Perhaps as time goes on we will find scientific justification for more ancient remedies long forgotten, or for remedies of other civilizations as in Africa and South America. It may even be that some really great discoveries lie hidden here. After all some witch doctor may have used a mold we now call penicillin.

Stock Reports on Supplies

FRED J. STOCK, chief of the Drug and Cosmetic Branch of the WPB Chemical Division, gave his most recent report on raw materials for this industry at the NWDA meeting late last month. Mr. Stock reported:

Limitation orders have been revoked on tannic acid, agar, glycerin, and milk sugar. Lanolin for cosmetics is still under direct control, but for drugs only certification to the supplier is necessary. Additional restrictions will be removed shortly. The container problem has materially improved since a year ago and all restrictions on glass containers for medicinals have been removed. Cosmetics are still facing container restrictions, but the outlook is for an increase in supply. Metal containers for drugs and cosmetics are still restricted, but recently sizable quantities of aluminum have been made available to container producers and this will further ease the container problem. Paper packaging material is still another problem. Shipping containers are adequate for drug products, but the cosmetic supply is short. Re-use and salvage will have to be continued for many months.

Pharmaceutical and proprietary remedies will receive 125 per cent of the base period of alcohol starting October 1. Oral antiseptics and mouth washes will receive 75 per cent instead of 60 per cent. Cosmetics will receive 62½ per cent instead of 50 per cent. This increase should help manufacturers to meet the seasonal demand for cough and cold remedies. The pharmaceutical industry has been given 125 per cent of their base sugar consumption for the fourth quarter. Corn starch, glucose, and dextrose appear satisfactory and no change is anticipated. Supplies of all sulfonamides are adequate. Present production capacity is ten million pounds annually. During the first six months of 1944, the industry produced approximately 2½ million pounds and was able to meet all demands.

Production of quinacrine (atabrine) is in excess of current requirements and by the end of the year sizable stocks will have been accumulated and there will be no need to continue to produce the large quantities that were produced in the latter part of 1943 and early 1944.

The cinchona bark program has brought out a sizable tonnage of South American bark although the quality is not comparable to Java bark. There has been made available a significant quantity of natural antimalarials from this bark which is largely being processed into totaquine. We have been allocating totaquine to liquid antimalarials (chill tonics) and to tablets, capsules, and pills. Totaquine stocks are increasing and we are able to meet all domestic and export demands. Some quantities of quinine are also being obtained from this bark. Our quinine position is not critical but it is not yet in the position where quinine can be released for civilian oral use. However, ample supplies of quinine will be made available for necessary ampul medication. The supply condition on quinidine remains critical although some is being produced from the South American bark.

Supplies of caffeine and theobromine are ample for all medicinal uses although some non-medicinal uses have been curtailed. The bismuth metal supply has improved and allocations for medicinal bismuth salts have been increased to the point that we are able to meet all civilian demands.

Imports of ipecac and emetine have increased but are still somewhat restricted. We feel, however, that ample supplies of ipecac and emetine will be available for medicinal use. Domestic production of belladonna has been sufficient to meet requirements and there are sizable quantities available. The supply situation on atropine is satisfactory. The industry has been able to import sizable quantities of hyoscine hydrochloride and supplies are now ample.

The supply situation on synthetic vitamins has improved as evidenced by the revocation of the riboflavin order, Thiamine hydrochloride is in greatly improved supply and is now ample for all civilian needs. Ascorbic acid production has increased and we are able to meet civilian demands. The situation on nicotinic acid and amide has improved, but supplies are not yet ample to meet all demands. Vitamin A continues in short supply although imports have improved during the past few months. Urgent demands will be met, but some limitations will have to be continued.

Citric acid continues in limited supply with pharmaceutical manufacturers receiving 75 per cent of their period use during the present quarter Indications are that this rate can be continued in the fourth quarter but not increased. Phenol is less acute than a year ago and adequate allocations will be made for all medicinal uses of phenol and for production of aspirin and other salicylates. Toluene, benzol, and aniline are in limited supply and medicinal chemicals made from these have had to take cuts. However, we do not believe drug uses will be denied over any appreciable length of time.

Our original production schedule for penicillin, inaugurated in June, 1943, planned a production rate of 200 billion units per month, or 2 million packages of 100,000 units each. Production has now reached that figure although supplies are not yet adequate to meet the demand and further increases in production are anticipated. All penicillin plants are now in production but many of these have not yet reached rated capacity due to many difficulties involved in this type of production. We feel confidently that production from existing facilities plus minor additional facilities now projected in order to correct bottlenecks will provide an ample supply.

Glass Container Restrictions Eased

GLASS container restrictions have been eased under a revision of WPB Order L-103-B. Cosmetic manufacturers are allowed on glass containers a quota of 130 per cent of the items they used in 1943, with a privilege of interchanging uses within quotas. Solid and semi-solid cosmetics are now restricted in closure quotas to 85 per cent of the 1943 consumption, fluid and powdered cosmetics to 50 per cent of 1943 usage, and hand soap and shaving creams to 100 per cent of 1943 percentages.

New Vitamin Concentrate Form

HARDEN F. TAYLOR, of the Atlantic Coast Fisheries, has sent us a number of samples of vitamin tablets which he calls "Emulsicaps." The tablets have been on the market for two years under pilot plant operation, but now a plant of much larger capacity is ready. The tablets have been used by several leading pharmaceutical houses including Lederle, Sharp & Dohme, Upjohn, Warner, and are suitable as a vehicle for a number of prophylactic and therapeutic agents in addition to vitamins. The tablets, which are elliptical in shape and of small size, consist of a solidified emulsion core, covered with a continuous, seamless, leakproof gelatin jacket. The tablets are very beautiful, having a high sheen and come in a wide variety of colors. The samples which we received include two shades of yellow, five shades of brown from a light buff through tans and chocolate brown to a very deep brown, an emerald green, and four shades of red from a crimson to a cherry red. The vitamins included in the samples are 50,000 units of vitamin D; 25,000 units of vitamin A; as well as A B D and multivitamin combinations and tablets containing 136 mg. 31.4 per cent mixed tocopherols.

Advantages claimed over other forms of vehicles are that the emulsified state favors completeness of digestion of all oils and oil soluble substances, and at the same time minimizes eructation and unpleasant after effects; the water solubles are discharged gradually and maintained within the body longer than when they are suddenly released; the coating, while continuous and non-porous, is much thinner than the normal sugar coat, the gelatin coat being 12½ to 20 per cent of the weight as required by the formula, while sugar coatings are usually 40 to 50 per cent; they cannot leak, even if they have no coating, the coating affording additional protection to the tablet; they can be made to suit different requirements and formulae—soft and soluble, hard and non-hygroscopic, in varied colors and flavors, as well as sizes.

Small Time Medical Research

"IN COMPARISON with research in other fields, plastics, metallurgy, petroleum, communications and aviation, medical research looks and is small time and amateurish," said Dr. Theodore G. Klumpp, president of Winthrop Chemical Company, before the recent meeting of the American Chemical Society in New York.

"As thrilling as our discoveries in medicinal chemistry have been," said Dr. Klumpp, "we have really accomplished very little in relation to what remains to be done."

"We have nibbled at the edges of such serious conditions as arthritis, rheumatic fever (which is perhaps the number 1 health problem in this country), tuberculosis, undulant fever, diabetes, allergy, and exopthalmic goiter, but we have not by any stretch of the imagination mastered them. I mention these things not to belittle what has already been accomplished but to emphasize what remains to be done.

"If you want to gain a comprehensive idea of what remains to be done, you need only consult the catalogue of the causes of death and the classification of diseases. Every cause of death and every illness suffered by man or useful animals is an unsolved problem.

"In my opinion, we have been attacking concrete fortifications with pop guns. We have sent out skirmishing parties, when we should have placed vast armies in the field. We have thrown a few millions into this scientific effort when we should be carefully spending billions."

War Time Conferences

FOR the three years that this country has actively been in the war, most of the conventions of this industry have been shortened to "war time conferences" held in large cities, principally New York. Elimination of all frills and entertainment has been a part of this streamlining, and part of the time formerly given over to entertainment has been used for business sessions so that the number of days consumed by the conference could be shortened. All this is proper in war time. However, we feel that these war time meetings accomplish very little in comparison with the type of conventions held at resort hotels before the war. Social functions, golf, and free time for social intercourse are essential parts of any successful convention. Business sessions alone with formal speakers accomplish very little in comparison with what is accomplished in informal talks during the times when there are no business sessions. Once the war is over, it will be for the benefit of the industry to get back to the pre-war type of convention.

Synthetic Vitamins Cut Again

LEADING manufacturers of synthetic vitamins are continuing their policy of lowering prices of these products as costs are lowered due to increased volume, amortization, and other economies. Latest reductions made last month were: Ascorbic acid down $2.00 to a new low of $25.00; Riboflavin down $50.00 per kilo to a new low of $230.00; Thiamine Hydrochloride down $20.00 per kilo to a new low of $180.00. These reductions are made in the face of an excellent demand that is taking all of these products that can be produced. Due to raw material scarcity, shortages exist in two synthetic vitamins—nicotinic acid and niacinamide. A shortage also exists in vitamin A because of the inability of the fishing industry to keep production of vitamin A containing oils up to the demand of military, Lend-Lease, and domestic processors. One very real factor in the vitamin A shortage is the great public expansion in the use of multi-vitamin preparations. This expanded use has become possible because of the greatly expanded production of the synthetic vitamins, so that the synthetic vitamins are partly responsible for the acuteness of the vitamin A shortage. What is really needed is a synthetic method of producing vitamin A.

The Menthol Situation

THE natural menthol situation is a bit confused according to reports from importers and dealers in this important item. While menthol is important to manufacturers in this industry, it is not large in volume. With Japan cut off as a supplier of the product, we must naturally turn to Brazil—the only accessible producer—for information concerning the market. A large importer of Brazilian menthol states that although lower menthol prices are forecast for 1945, contingent on the Brazilian menthol crop, no floor price has yet been set in Brazil and consequently it is recommended that purchases in this country be made on a basis of quarterly contracts to assure continued supply with protection against possible price declines. This importer further states that in 1943 Brazil's menthol production was approximately 40,000 pounds, jumping to between 400,000 and 500,000 pounds in 1944, and a 25 per cent to 50 per cent increase is anticipated in 1945, barring unfavorable developments.

This importer also states that consumption of menthol in this country in 1939 was approximately 550,000 pounds, and that if menthol had been in free supply this year consumption would have been much greater than it is. Many consumers of menthol, he claims, have reduced or eliminated their use of menthol due to scant supply and consequently high prices, but during 1945, as the supply increases and prices decline, consumption is expected to increase to near its potential consumption in this country of between 650,000 and 700,000 pounds.

Opposed to the picture as presented by this importer are facts brought to light by other interested parties. Whereas the importer making the original statement concerning the market states that consumption in 1939 in this country totaled 550,000 pounds, imports for that year are revealed to have been only 354,000 pounds on a domestic market ranging from $3.10 to $3.15 per pound. Whereas the importer referred to above states that the potential consumption now at reasonable prices is 650,000 to 750,000 pounds, it is a matter of record that consumption here never even approached the 500,000 pound mark.

Imports for the past sixteen years for which figures are available from the Government are as follows:

1940	404,404
1939	354,668
1938	365,920
1937	417,193
1936	341,510
1935	281,941
1934	424,886
1933	282,912
1932	351,268
1931	327,384
1930	314,695
1929	288,776
1928	242,566
1927	360,614
1926	451,681
1925	290,442

For the five years, 1936 to 1940, the average of the imports of menthol and therefore the average consumption in this country was 376,739 pounds. For the ten years, 1931 to 1940, the average imports or average consumption was 355,209 pounds. And for the sixteen years, 1925 to 1940, the average imports or average consumption was 343,804 pounds.

This would seem to clinch the argument that the statements made by this importer are out of line, and that increased production in Brazil such as he indicates should result in a large oversupply of menthol at least so far as this country is concerned. However, the opening up of other consuming countries as the war in Europe ends might tend to curtail the oversupply from the Brazilian crop and might make the market firmer than it otherwise would be.

Price Maintenance Forbidden

THE Fair Trade action brought against Eastman Kodak Company by the Federal Trade Commission has resulted in Cease and Desist Order being issued requiring Eastman to discontinue use of a resale price maintenance policy in interstate sale and distribution Kodochrome and magazine films. The reason for this action is that the Commission claims that Kodochrome has no competitor, and the Fair Trade Acts and the Miller-Tydings Act itself permits Fair Trade contracts only on items "which are in fair and open competition with commodities of the same general class produced by others." Such a condition would hardly obtain in the cases of drugs and cosmetics, for even though many medicinal agents or cosmetics might be of special formula covered by patent or kept secret, they would be in competition with other preparations used for the same purposes.

Alcohol Supply Improves

THE alcohol supply picture has improved so greatly that even though the month of August was given over to the production of beverage spirits by the beverage distillers, an increase of 25 per cent has been ordered for restricted users for the last quarter of this year. This increase means an advance of the 25 per cent of the amount that has been allowed. For example, the cosmetic and toiletries manufacturers, who had been cut to 50 per cent of the base period, are now allowed 25 per cent more than 50 per cent, or 62½ per cent. The beverage distillers produced 54,000,000 proof gallons of alcohol during the month of August. Government stocks of 190 proof alcohol totaled 58,100,000 gallons on September 1, representing a reduction of 22,800,000 gallons from the August 1 figure of 80,900,000 gallons. Since the 54,000,000 proof gallons produced by beverage distillers during the August holiday is equivalent to approximately 28,500,000 gallons of 190 proof alcohol, the stockpile would have been greater than it was on August 1 if beverage production had not been allowed. Also there is a surplus of approximately 6,000,000 gallons per month between production and requirements. This means that a surplus of some 70,000,000 gallons per year is now in sight and this figure is not very far below the total requirements of alcohol for our normal needs before the war. If this condition of supply and demand continues, it should not be long before all restrictions are removed from alcohol. Certainly with the end of the European phase of the war, the decreased demand for rubber to conduct the war, as well as the lessening of other demand for alcohol should change the picture quite rapidly.

Penicillin Developments

FURTHER important commercial developments have taken place in penicillin since our last report. In the first place the price has been very sharply cut by the largest manufacturer. The price for June was $1.60 per 100,000 units; $1.45 for August; but a very drastic cut was made for September to 95 cents. Production for this manufacturer advanced from 70 billion units for July to 89 billion units for August, and to over 100 billion units for September. We do not know what the October price will be as we write this, but further reductions can be anticipated as this particular manufacturer looks forward to an eventual price in the neighborhood of 50 cents per 100,000 units. The Government is now paying some penicillin producers six dollars or more for the same quantity.

Another interesting development is that some manufacturers have further stabilized penicillin to the point at which a year's dating is now allowed, and one manufacturer claims that his material is actually stable for a year and a half. Also hypodermic tablets of penicillin are being produced to replace ampules. The British have been using tablets, and they are being produced now in this country since our Armed Forces believe that they also will want to use them in place of ampules.

Essential Oils in England

JOHN L. HINDLE, chairman of Standard Synthetics, Ltd., London, also operating a branch in New York, writes us as follows with reference to essential oil conditions in this country and in England.

"There seems to be a general impression in this country that, while the Government in Washington is heaping restrictions and controls upon the essential oil trade, the British Government is doing just the opposite. Rumors have gone around that shipments of Italian lemon oil, Bourbon geranium, vetivert, jasmin absolute, and other items have been arriving in Britain and that the British Government is assisting traders to build up their home and export trade at the expense of their American competitors.

"These rumors and impressions are completely without foundation. In fact, control by the British Ministry of Food is so complete and comprehensive that, apart from a few large manufacturers of aromatics, all essential houses in Britain are now depending on re-payments of excess profits taxes to tide them over until the war finishes.

"Government interference here in the United States is looked upon as a great burden, with the OPA, WPB regulations, and allocation of raw materials, and so forth, but compared with the Control Scheme in Britain, we are treated very leniently. For instance, suppose a candy maker in England wants 28 pounds of orange oil. He sends an application to the Ministry of Food, states the purpose for which the oil is required and nominates his pre-war supplier. Some months later, the supplier receives notification that one of his customers is permitted to buy 28 pounds of orange oil and if he will send a check at once, the oil will be shipped from the Government warehouse at the fixed ruling price with a 5 per cent profit allowed. Some months later the oil is shipped and eventually payment is received.

"These transactions are very few and as profits are meager, it is not surprising that most essential oil firms are now operating at a loss and only survive on repayments of taxes paid in the good years 1939 to 1941.

"This state of affairs fortunately has not yet arrived here, and probably never will, but the rumors of good business being done in Britain both in their home and export trade are definitely false.

"We have heard a lot of groaning here about the difficulty of obtaining export licenses, but compared with conditions in Britain, we are well treated. There it is practically impossible to any importing or exporting business because all necessary exchange of merchandise is handled by Government departments under Lend-Lease and only material needed for war purposes is dealt in. In order to conserve supplies for war purposes, Britain has cut her exports down to an absolute minimum in spite of the fact that exports are her life blood, and only token shipments abroad have been permitted so as to keep the customer's good will. After the war, we shall undoubtedly see strong competition from Britain in world markets, but first the controls will have to be removed."

DCAT Membership at New High

THE Drug, Chemical, and Allied Trades Section of the New York Board of Trade, which section annually sponsors the March Drug Trade Dinner in New York, now stands at an all-time high in membership, consisting of 500 firms extending from the Atlantic to the Pacific oceans and from Texas to Canada, according to Guy L. Marsters, vice-chairman of the section. Sixty companies joined the section within the past three months.

Another Maker of DDT

ANOTHER chemical manufacturer is joining the list of those who are making DDT, the famous insecticide, for the Government. The J. T. Baker Chemical Company announces that pilot stages of their DDT operations have been completed, and that the plant capacity is being installed to carry forward this product on a large scale. Thus Baker joins with Geigy, Merck, DuPont, Hercules Powder, Monsanto, and American Home Products to produce this important product.

Indian Essential Oils

BESIDE sandalwood oil, India produces, in Rao (Indore State), oils of ajowan and dill. Thymol of fairly good quality is produced from oil of ajowan. Camphor and camphor oil are being produced on the Hallacary estate, Coonoor, and hand-pressed citrus oils and lime oil are produced in other parts of India. At Yercaud, South India, good quality geranium oil is produced, while linaloe oil of good quality is being produced in Bangalore.

Shark Fishing in Argentina

SHARK fishing is rapidly becoming an important industrial activity in Argentina. Statistics of catches since August 1943 to the end of that year show that in August, 1943, 20,322 fish were caught; in September, 1943, 22,000 fish were caught; this jumped sharply to 45,514 fish in October, 1943; and again the total jumped sharply to 54,762 fish in November, 1943; with a sharp decline in December to 13,787 fish.

Reconversion

by Francis Chilson

The Consolidated Vultee Ft. Worth plant is the largest air-conditioned building in the world and could be used to advantage by drug and cosmetic companies under the plan proposed by Mr. Chilson, industrial consultant, in this article.

ALTHOUGH the drug industry has little interest in plant reconversion as such, since it did not have to convert in the first place in order to get into war production, it nevertheless has a vital stake in the national problem, particularly that phase of it dealing with the disposal of the huge plants erected at government expense for various war purposes. It strikes me that the utilization of these plants offers the drug and cosmetic industry a golden opportunity to decrease operating costs, to increase plant capacity and enhance consumer service which will not come again in our time. I refer to the utilization of the large war plants by groups of small firms, by holding corporations owning many companies and also by the large manufacturing companies which now are located in uneconomical buildings on uneconomical plant sites and in uneconomical areas and which also are now in need of additional space for plant expansion.

Many of the large war plants are unsuitable for anything excepting the purpose for which they were erected and they must, of course, be junked. Plants in this category include aluminum plants, magnesium plants, steel, rubber and oil plants, et cetera. Some plants were built of sheet metal in the flimsiest manner possible and hence must be junked because the upkeep and operating costs would be far too great to continue their existence for any purpose. Still others were built in inaccessible areas and perforce are useless.

In the main, however, the majority of war plants have been substantially, if hastily, built in accord with rigid construction specifications. Some of the plants, indeed, like the Consolidated Vultee Plant at Fort Worth, Texas, are not only well built and attractive looking but are also completely air conditioned.

In general, buildings erected for the production of aircraft, have been built in a substantial manner and many are architecturally attractive as well. The majority of them, likewise, are well located, near im-

portant market areas, where they have access to a plentiful supply of labor. Willow Run is located near Detroit. The Dodge Engine plant is located near Chicago. There are several aircraft plants near Los Angeles, Fort Worth and New York City, and there are also some very large plants of various kinds in the New England States. In general, the majority of the larger war plants will be found near the principal market areas of Boston, New York, Philadelphia, Pittsburgh, Chicago, Dallas and Los Angeles. Virtually all of these plants have adequate railroad sidings, truck docks, power, water, recreation and parking facilities. In all, there are 1200 government owned war plants which cost us a total of $15,000,000,000.

It seems to me therefore, that the government instead of hoping to find enough individual organizations large enough to take over even the largest of the war plants, should concentrate on selling these plants to groups of firms in specific industries, so that the plants would become jointly operated industrial centers.

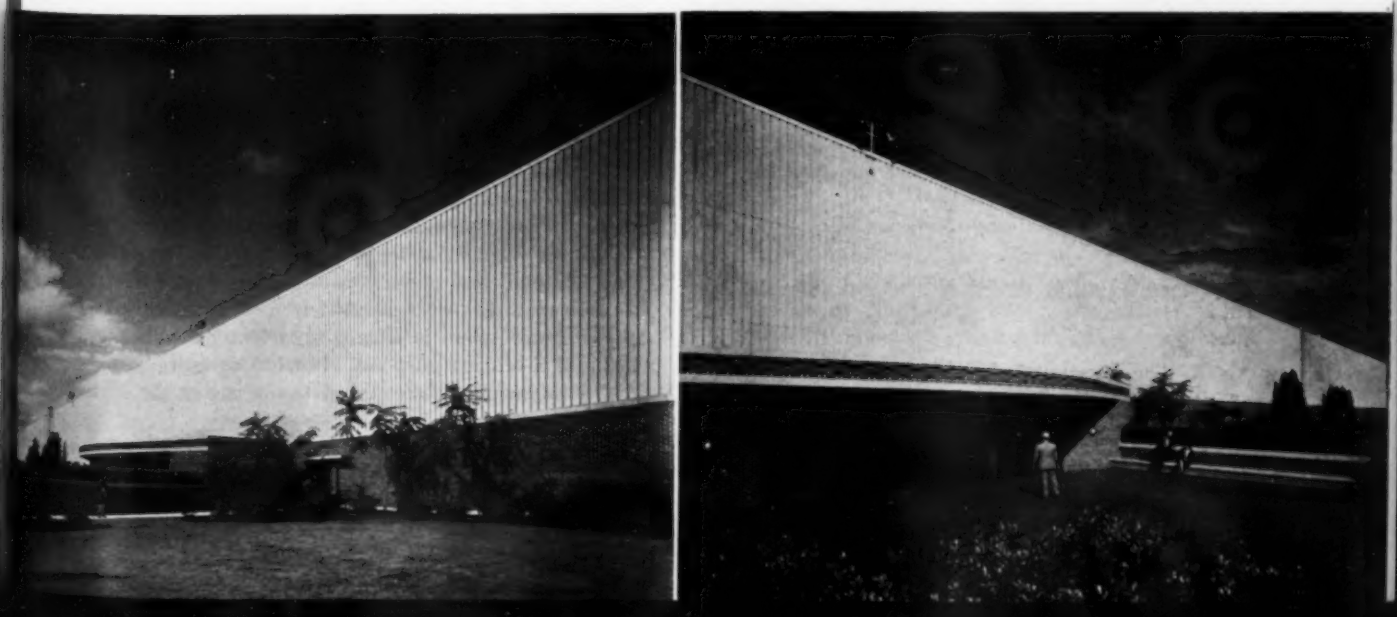
Even though many of the war plants, especially those built for the construction of aircraft, tanks, engines and ordnance of various kinds, seem colossal in size, the acreage of floor and ground space occupied by some of the larger drug and cosmetic plants likewise is colossal.

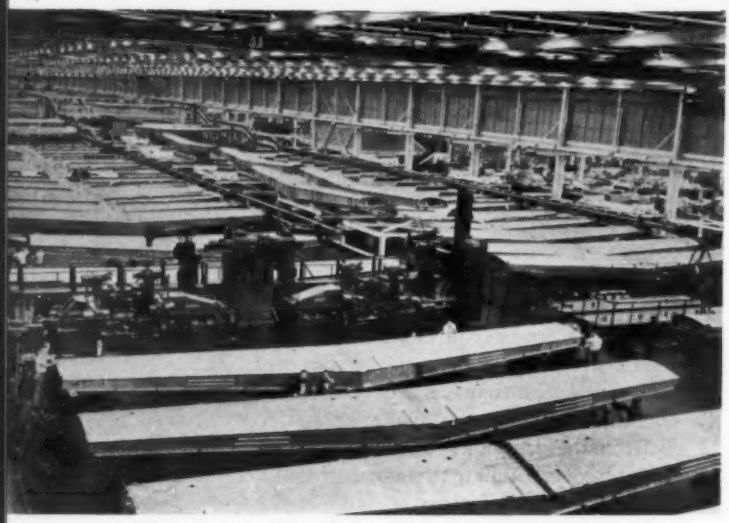
There are in the drug and pharmaceutical industries a substantial number of plants occupying more than a half million square feet of floor space each. Judging from my correspondence, it is apparent that a high percentage of all drug and cosmetic firms are planning expansion and modernization programs for the post-war period. Some of our large plants many of which are in need of modernization, occupy more than a million feet of floor space. Near New York City a prominent manufacturer of pharmaceuticals and fine chemicals occupies a plant site that is roughly a mile and a quarter square, much of it being taken up by one-story buildings. Such a plant site represents 43½ million square feet of ground space. In other words if all this space were housed under a single roof, the plant would be over 20 times as big as the 2 million square-foot Consolidated Vultee plant at Fort Worth which is being referred to by some government officials as a white elephant! In point of occupied space the drug and cosmetic industry cannot be regarded as lilliputian by any means.

Let's take the Willow Run plant, for further discussion. This plant is regarded as a hopeless liability because it contains several million square feet of space, an amount far beyond the individual requirements of the majority of most firms in ours or other trades. But the point I wish to make is that even such a huge plant could be used as a manufacturing center by groups of firms in the drug and cosmetic industry. The idea of housing several different competing and non-competing firms in the same factory building is not new. Industrial buildings like Bush Terminal in Brooklyn, the Starrett-Lehigh Building and the Port of New York Commerce Building are all huge manufacturing and warehousing centers, housing a multiplicity of manufacturing firms of all kinds. Industrial buildings of this type provide railroad service, trucking service, warehousing facilities, light, heat and power. Such buildings, however, are operated entirely for profit and will charge as much as the law allows for the space and service which they have to sell. Hence, a point eventually is reached in the growth of individual companies when it becomes economical to move out of such centers into their own factories.

But the type of operation I have in mind would be handled on a non-profit basis, by means of an operating company jointly owned by all the manufacturers occupying the same building. The operating procedure involved would be simple. A group of manufacturers in need of additional space would together form a real estate and service company. This service company would acquire by purchase or long term lease from the government, a suitably located manufacturing plant.

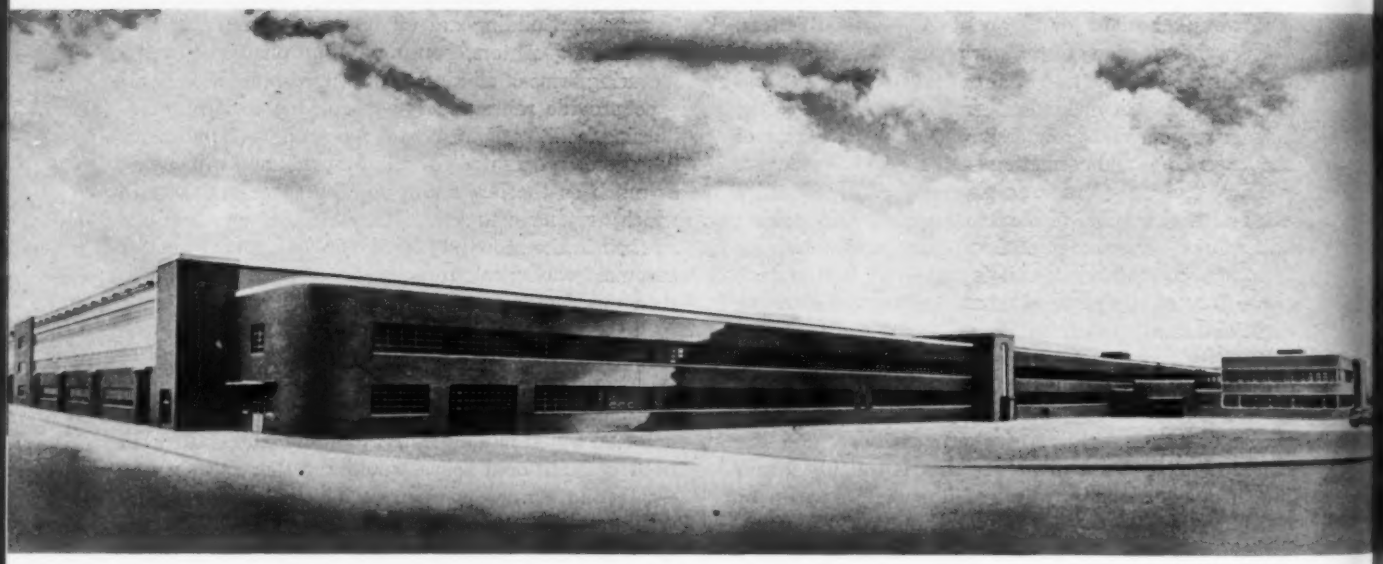
Through the device of jointly owned operating companies a large plant such as Consolidated Vultee's could be occupied by a multiplicity of small competing companies or by fewer somewhat larger ones.





Mallinckrodt, Monsanto, et al, the batch is rigidly checked in the producer's control laboratories to make sure it conforms to required standards of purity. Depending on its size, this batch of material may then be distributed among 50 or 100 purchasers in the trade, none of whom dares to take a chance on the label statement of the primary producer because everybody and every firm makes mistakes, and too many things could happen to the material between the plant of the maker and the plant of the user. Hence, the manufacturer using the barrel of chemicals puts it through a more or less exhaustive series of tests before the material is used. This means that a single batch of material may, according to its nature and the volume in which it is produced and consumed be tested anywhere from one to more than 100 times by as many firms. Each test is made substantially in the same manner and the total cost of the testing may well run into several hundred dollars before the material is finally used by the several manufacturers who purchased a part of the original carefully tested batch. In some cases, vitamins for instance, the tests are prolonged and extremely expensive. Hence, a centralized control laboratory testing and certifying raw material for manufacturers occupying the same premises would effect substantial economies for all the manufacturers involved.

Joint occupancy of the Willow Run plant by several companies, for example, would provide reduced overhead and handling costs, accessibility to markets and labor supplies.



PRESS ASSOCIATION

The building would then be divided by means of partitions in accord with the individual requirements of the several tenants. The operating company would maintain the building and provide light, heat, power, trucking service, railroad facilities, a common warehousing service,—and it also could operate with great economy centralized analytical control laboratories for the examination and certification of incoming raw materials for the use of the several tenants.

At this point, it may be well to emphasize that the cost of analytical control as a major item of overhead is steadily increasing and the increase will accelerate in the future as government regulations become more and more stringent. Yet, this large item of trade overhead represents, as now conducted, a very great waste of money and technically trained manpower. For instance, when a batch of a given chemical is manufactured by any of the primary producers, such as Merck,

Another substantial item in manufacturing costs consists of steam and power. Most of the plants in the trade operate low pressure boilers for the reason that low pressure steam is usually sufficient for manufacturing and heating purposes. But low pressure boilers are by no means as economical to operate as the high

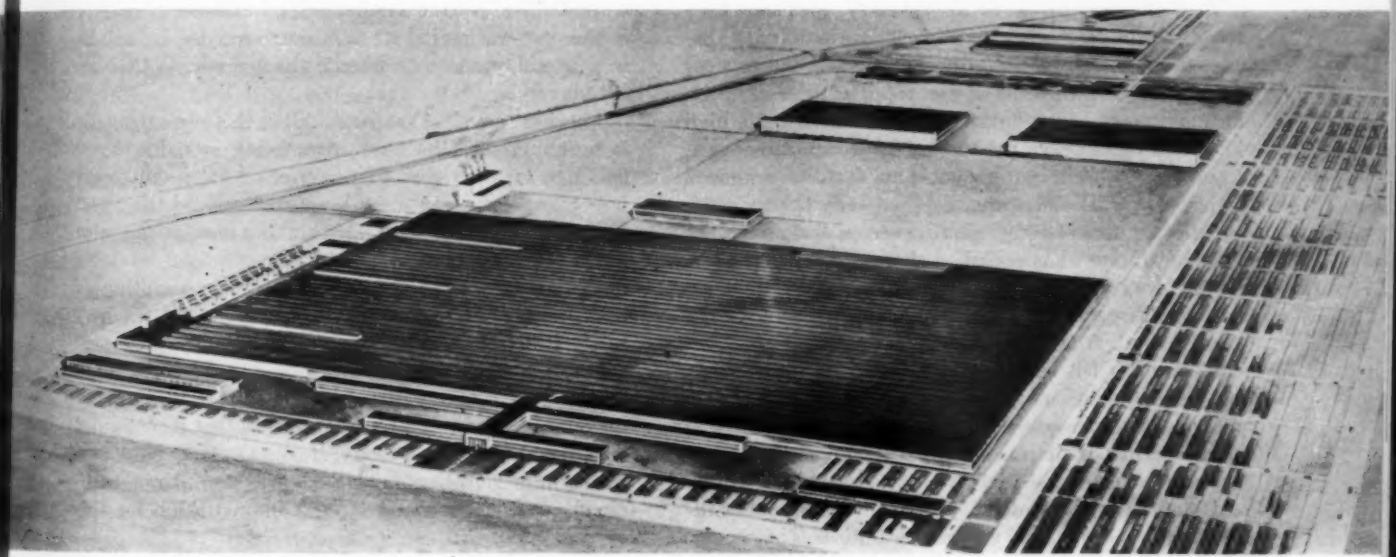
pressure boilers with which the larger war plants are certain to be equipped. Many firms do not use enough power to warrant the operation of a generating plant, even if they had suitable steam generating equipment. But many of the war plants do generate their own power. They are equipped with 450-500 pound boilers and are using steam turbines as reducing valves, so that the reduction of high pressure steam to that pressure required for normal processing purposes makes possible the generation of power at virtually no cost by simply connecting suitable generating equipment to the turbines.

It is an axiom of good plant management that a factory exists only for the service of sales. Every item of cost therefore, should be trimmed to the bone and cooperative operation provides an unrivaled opportunity for cost reduction.

Before elaborating further, let's briefly review the pharmaceutical industry from a manufacturing point of view. First of all, it can fairly be said that the majority of our plants are not suitably built for the work being conducted in them. These plants embrace every type of construction known to man. Many of them have grown like Topsy—decidedly haphazardly. In some instances long established plants like those of Parke-Davis, Lilly, Upjohn, Sharp & Dohme and many others have grown up in a more or less hit and miss fashion, while the cities in which they started as small organizations likewise have grown up around them, making the problem of lateral expansion very difficult and increasing tax overhead tremendously. In the case of two of these large enterprises, they are not even located on railroad sidings and hence, they have an unnecessary trucking cost, which is extremely high. Because of the unavailability of adjacent land on which to expand and because of the prohibitively high cost of land in large urban areas, these plants have been forced to develop as multi-story structures, which adds substantially to their manufacturing costs.

Some firms like Sterling Products, American Home Products and others own a multiplicity of plants of every type and description scattered all over the country. For such firms, the establishment of manufacturing and warehousing centers in appropriate locations and under centralized management offers a possibility for cost reduction which staggers the imagination. These large holding corporations have expanded because their interest lies in acquiring profitable businesses and not in acquiring factories or real estate. Since many of the businesses they have acquired in the course of time have grown up in all kinds of efficient

(Continued on page 492)



Even the Dodge Chicago plant, big enough to house Willow Run with space to spare, could be utilized to advantage by drug and cosmetic companies under Mr. Chilson's plan.

The Drug Industry's

Some of the Current Retailing Problems and a Proposal for Removing Intra-Industry Friction

With the post-war period uppermost in the minds of the executives of this industry, problems that retailers will face when fighting ceases are being discussed by many interested people. The business of manufacturers, wholesalers, and retailers alike has been at a high level and will continue at an abnormally high level as long as heavy production for war purposes continues to keep our national income far above normal levels. Drug manufacturers have already been given a taste of what will come when peace is declared, since the Government has curtailed sharply orders for some of the drug products which had been ordered in excessively large volume. But when the fighting finally ceases on all fronts, the sharp decline in national income will be felt sharply not only by manufacturers, but also by wholesalers and retailers. In this period, manufacturers, wholesalers, and retailers will have to cooperate for their mutual benefit, and it is this cooperation that many are trying to plan now.

Retailers and wholesalers are still groaning under the duplication of so-called ethical specialties. They see no reason why certain combinations, identical with many pharmaceutical manufacturers should have to be carried in stock merely because detail men are successful in convincing the doctors to specify a combination with the name of a certain manufacturer on the prescription. By and large, they maintain, the retailers try to fill the prescriptions honestly, and when the name of a particular manufacturer appears on the prescription blank, they want to fill the prescription with the product of that particular manufacturer. But they feel that the manufacturers are putting too much of a strain on their ethics by this sort of detailing. They do not profess to know the answer, but they find it impossible to carry in stock all the various combinations under all the various labels of manufacturers. Therefore, they feel that they should be able to carry a certain combination under the label of a few very reputable manufacturers and then if necessary phone the doctor and ask if any of the labels they have in stock are satisfactory. But while such a procedure is not to the liking of the retailer, he feels that he must follow some such procedure unless the manufacturers stop loading him up with identical products under different labels. Certainly in the post-war period when business recedes, he will be in a poorer position to handle these products than he is today.

Another thought that is troubling the retail druggist is how many of the new drugs being introduced are going to be restricted to prescription sales only, and how many are going to be by-passed around the retail pharmacy altogether. He is thinking now in terms of the sulfa drugs and penicillin. In the case of sulfa drugs, sales can only be made on the prescription of physicians. This means that the doctors and the hospitals are large markets for sulfa drugs and a high percentage of this business does not pass through the retail druggist. As one man interested in retail pharmacy expressed this trend: "I have no doubt that if acetanilid were being introduced today, it could only be sold on a doctor's prescription." He placed the blame principally on the Food and Drug Administration for this type of action.

The retailer is wondering where he is going to stand with regard to penicillin when it becomes more freely available for civilian use. At the present time distribution is being made to hospitals and there is no definite assurance that retail druggists are going to be allowed to handle the product at all. Since the product is not used orally, but only by injection or local application to open wounds, the druggist wants to know if the doctors and the hospitals are going to be the only ones to handle the item. Then he is also looking to the future when penicillin ointments or other penicillin combinations might be developed. He feels that with the advent of these products, as with blood plasma, the hospitals will take away from the retail druggist much of the business that would normally come his way. He wants to be assured of his rightful place in the scheme of medical care, but he sees the possibility of the parade passing him by, and he feels unable to do anything about it. He feels that it is up to the manufacturers to see that he is not passed by in these new developments.

Post-War Program

Many people interested in retail pharmacy do not feel that the prescription requirement for many drugs accomplishes its purposes. It is said that when prescriptions were made necessary for barbiturates, production of these products doubled. They feel that when a product is restricted, then everyone wants to have it. There is no doubt that there are violations of this requirement of a doctor's prescription for the purchase of barbiturates, but here again the retailers are prone to place some of the blame on the manufacturers or wholesalers because they are perfectly willing to load a druggist up with barbiturates even though they should know from his purchase of other products that he cannot be selling them legitimately. In other words, those interested in retail pharmacy feel that the manufacturers or wholesalers are partly responsible for the druggist yielding to temptation in the sale of products over the counter which should only be sold on prescription.

The steps to be taken to develop cooperation among the manufacturing, wholesaling, and retailing groups are occupying many minds. The National Drug Trade Conference has long been in existence and has accomplished much good. But controversial matters cannot be settled in the conference for the reason that a unanimous vote is necessary for action, and if one vote is cast against a proposal, nothing can be done. In the depression of the thirties, the Drug Institute of America was formed for the apparent purpose of salvaging the credits of the wholesale drug trade. The Institute was supposed to accomplish much more than this and was looked upon by many as an organization that could be continued for just the sort of cooperation as will be needed after the war. However, it is plainly impossible or organize any association that can include in its membership all the divergent interests that make up the drug, pharmaceutical, cosmetic, and sundry manufacturing, wholesaling, and retailing industry.

The individual associations do a very good job in keeping all their members in a harmonious state of mind, but no such harmonious state could be produced if all of these interests were thrown together. It has been suggested that something might be accomplished by having a group that would meet informally every so often. This group would consist of the presidents and the secretaries of all the various associations in manufacturing, wholesaling, and retailing. It is believed that these men could discuss each other's problems and complaints in a strictly informal way and then report back to their own associations for such action as the individual associations might be willing to take. One interested man stated emphatically that the lawyers of the various associations should be left out of these informal meetings. The main feature of these informal meetings would be that no association would be bound by what transpired at the meetings, and any definite action would have to be taken by the executive committees of the associations themselves.

It would be well for the manufacturers in this industry to give serious thought to the problems that must arise when the war is over. Victory is in sight although a hard job lies ahead before it is realized. However, this industry has solved practically all of the problems that have been presented to it by the war and it is now well established on a war-time basis. The problem that must certainly be faced is the shift from this war-time basis to a peace-time basis. This shift is going to be just about as difficult as the shift to a war-time basis although the problems will be of a different nature. Now is the time to try to determine what the problems are going to be and try and solve them. The shift will certainly be easier for all concerned with the manufacturing and distributing of the goods of this industry if some attempt is made to iron out the inequalities that exist between the different branches of the industry. Complaints from wholesalers and retailers should be taken seriously now and methods for easing the conditions causing these complaints should be sought. For while they might not appear serious just now, they might be the cause of wide discord in the post-war period when the greatest unity will be most essential.

SKIN pH: I should like to ask a question. How can one make a test to show whether the skin is acid or alkaline? Long Beach.

In determining the pH of the skin, one simple procedure which has been used quite successfully and which is rapid and fairly accurate, consists of a colorimetric method based on the use of chlorothymol blue. The color change is noted after contacting a drop of the indicator solution with the epidermis, and then comparing the color change with known standards. This indicator covers the pH range from 5 to 7.5.

Another simple method might be to apply moistened indicator paper to the skin for a short time and then compare the color change with known standards. Papers for this purpose are available in any chemical supply house. Since the average skin pH is 5.5, indicators in this range should be used.

THE picture in the field of dentifrices has changed and is changing considerably in war times. The influencing factor has been to a great extent the packages to hold and preserve these preparations properly. Up to the time of the outbreak of World War II and the entry of our country into the conflict, dental creams or tooth pastes were used in the greatest volume in the dentifrice field. Tooth powders came next and liquids were a poor third.

The scarcity of tin and subsequent difficulties with substitute collapsible tubes has resulted in greater production and sales of tooth powder, because the facilities for packaging a tooth powder have not met with the same number of difficulties. Liquid dentifrices have cut into the volume of dental creams, due to intensive advertising and the fact that some users enjoy the quick lathering qualities of the wetting agents generally employed as the foaming ingredient in these.

It may then be said without much danger of contradiction that the packaging of dentifrices, especially as regards tooth paste, has given more difficulty in these war years, than the production of the products themselves. The transition from the previously used type of containers to those made necessary by wartime scarcity has been gradual and constructive. Tin tubes were first changed to tin-lined collapsible tubes. Then smaller tin content tubes were introduced. As the scarcity of tin increased, the tin was practically eliminated and lead tubes with small quantities of tin and other metals coated on the inside with waxes and resins, were introduced. Plastic tubes were used to a very limited extent. The industry cooperated most cheerfully in the preservation of tin and did yeoman service in requiring the purchasers of dental creams to turn in the empty collapsible tube in order to purchase a fresh tube of tooth paste. While this occasioned much trouble and inconvenience as well as some antagonism by cantankerous users, great quantities of this much needed metal were salvaged for urgent war needs. The use of the substitute tubes presented new problems which had not been anticipated by the industry. In some cases the use of high lead content tubes transmitted lead to the cream and paste packaged in these tubes through absorption, which might have resulted in lead poisoning and produced a dangerous condition to the health of the consumer, unless this absorption was held to a safe minimum. To avoid any such condition, food and drug administrators gave close scrutiny to this detail and set up certain tolerances which guarded against lead poisoning.

There is no questioning the fact that this exigency has resulted in greater attention upon the part of these officials to tooth pastes in particular and dentifrices as a whole. This will undoubtedly regulate the composition and claims of dentifrices more closely in the future when war problems are not as pressing as now and they have more time for general supervision. The coatings used to prevent absorption at first were not at all satisfactory. They had to be produced rapidly and the trial and error method was largely resorted to to determine their efficiency. The wax type coatings were brittle, did not adhere satisfactorily and softened too much or

dissolved in the presence of certain dental cream ingredients. The resin type coatings while they had better adherence, did not stand up entirely satisfactorily and in many cases caused severe discoloration of the product as it aged. This condition could not be determined by accelerated laboratory tests.

Powders too gave packaging difficulty. These had been largely packaged in metal, decorated cans in pre-war times. Special nickeled tops were used in many cases for convenience and for appearance's sake. The restrictions on the use of steel and tin made it necessary to turn to other materials to construct the packages. Paper box manufacturers became swamped with requests not only for tooth powder containers, but also for containers to hold powdered products in other fields. In spite of this condition, ingenious and practical paper packages were designed during the emergency. When it came, however, to producing them in great quantities, lack of machinery and equipment, shortages of labor and increased essential war packages with higher priorities, made it difficult to obtain

Wartime Transitions in DENTIFRICES *Point to Future Changes*

By E. G. THOMSSEN, Ph.D., Consulting Chemist

these packages in sufficient volume. Then too, certain problems arose with the paper packages themselves during shipment, on the dealers' shelves and in the hands of the users. It was found that the powders deteriorated more rapidly in paper than in tin, that there was some discoloration and that in many cases the strength of package was not sufficient to prevent sifting. These deficiencies had to be corrected from time to time.

Fortunately as has been the case in other directions, developments in the plastics' field have made it possible today to produce such satisfactory combination paper and plastic containers that they may, in some cases, replace the commonly used metal and glass tooth powder packages of several years ago. In cases where glass was used as the package, transformations were not as revolutionary as with pastes and powders packaged in metal, but here also certain alterations were necessary. These comprised lighter weight and standardization of designs which were necessitated to accelerate production of the glass blowing machines and economize in the quantity of glass used per bottle. The load thrown upon the glass manufacturers by the food and other industries has been so enormous in war-time as to make changes of this sort necessary. Furthermore, it has been difficult to obtain bottles in sufficient volume to supply the demand, and especially by industries who were not large users of bottles in pre-war days.

It will pay for a brief period to speculate upon what these transitions of the use and packaging of dentifrices may have upon post-war markets. It is undoubtedly true that millions of consumers have had to switch to dentifrices they have never used previously and which had never come to their attention. This is true not only among the men and women serving in the armed services, but in congested war plant localities and in stores where shortages existed. This will result in considerable consumer shifting of brands. Those consumers who economize have discovered that tooth powder is used up more slowly and goes further than paste or liquid. They will probably become tooth powder users. Others will discover that they like the flavor, cleansing quality, foaming quality and condition of the mouth better following the use of some new dentifrice. People who never cleaned their teeth before have become constant users now that they have been broken in to using dentifrices during a prosperous era. Others will change to liquids because they like the flavor, the clean after feel and the ease with which these are applied to the brush, even though they are informed that it is necessary to augment the use of liquids with an abrasive tooth cleanser one or more times weekly. It is to be doubted that salt or sodium carbonate recommended for such use in a semi-dry form will ever become popular. There is poor taste appeal here.

These new problems are being constructively met and will be solved in post-war days by clever merchandisers and advertising men in the dentifrice field. They will probably result in new types of sales policies and promotion. These changes are already evident especially in the advertising end. It is very probable that in the period of years ahead of us new brands of dentifrices will spring up based upon new claims for efficacy. While the daily care of the teeth had become an established custom in the majority of homes, in

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Arrow Poison of Amazon Witch Doctors

CURARE

Proving Its Value as a Useful Drug

By M. A. LESSER

THANKS to generations of fiction writers the word "curare" generally conjures up pictures of witch doctors deep in Amazonian jungles and sudden, horrible death from curare-poisoned arrows projected from blow-guns. But that picture is due for a change, for curare has been tamed from a potent killer to a valuable weapon of medicine. Indeed curare is on its way to become an important addition to the medical armamentarium. Already curare has proved its worth to soften the effects of shock therapy used in certain mental disorders, to relieve certain neuromuscular diseases, and, more recently, as a useful adjunct in anesthesia and surgery.

The first specimens of crude curare are said to have been introduced to Europe from South America by Sir Walter Raleigh and no doubt his vivid and somewhat gruesome description of its poisonous action formed the basis of curare's bad reputation—a stigma that still persists. Although samples of native curare continued to drift into civilization from time to time, very little effort was made to study the potentialities of the substance until about the middle of the nineteenth century. Although others had done some work on the drug, the first really extensive study of curare was that done by the great physiologist, Claude Bernard.[1] He described the physiologic action of the drug upon the neuromuscular junction and confirmed that it caused death by asphyzia through respiratory arrest.

Although several attempts were made to introduce curare into therapeutics, the drug remained more or less a laboratory tool for the study of certain physiological processes, since it produces immobility in animals without inducing central nervous system paralysis.[2] As pointed out by Bennett,[3] the chief drawback to further investigations was the fact that no two witch doctors used the same procedure for making their arrow poisons. To make the chemical and pharmacological studies even more complicated, the native curare makers sometimes added other lethal substances, like snake venom, to the curare preparations. The fact that different curare plants gave varying action did not help the situation any.

The difficulty of obtaining authentic curare was not overcome until the 1930's when Gill,[4] who, having been told that the drug might have been of great help when he was suffering from spostic paralysis, led an expedition among the South American Indians to learn more about the plant and its products. He was able to learn the actual botanical ingredients as well as the secrets of curare manufacture. Moreover, he brought back the largest amount of authentic and field-tested curare ever collected, thereby providing material sufficient for accurate study and assay.

It has long been known that curare is prepared by brewing the stems, roots, bark and leaves of plants of the *Strycnos* species. However, as shown by the studies of West[5] and others,[6] different curares differ considerably in composition; this often depending upon the botanical origin of the different specimens and their point of origin. The curare now chiefly employed in therapy is obtained from the plant, *Chondrodendron tomentosum*.

Commercially, curare is obtained as a brownish or black shiny resinous mass that is soluble in cold water or dilute alcohol. Of the many varieties of curare that have been available, only three rate any importance. These derive their names from the containers in which they are sold. Thus, tubocurare is sold in bamboo tubes, calabash curare in gourds, and pot curare in earthenware jars. Tubocurare contains two alkaloids; tubocurarine which possesses the main properties of the crude drugs, and curine, which is much weaker. Calabash curare yields curarine, a very potent alkaloid similar to tubocruarine. Pot curare contains three alkaloids, but only one of them, protocurarine, displays the typical curariform effects.[2] According to Burman,[7] Brazilian curare from the Strychnos group and the Erythrina curare are the only varieties suitable for therapeutic purposes. Chazuta curare from Peru is not suitable for use in medicine.

Stripped of its centuries-old hocus-pocus, the methods of preparing crude curare are not especially involved. For example, Vellard[8] reports that the Nambikwara tribes prepare curare from the red juice of the roots of a variety of Strychnos. The roots are extracted with water which is then quickly heated to precipitate some of the impurities, after which the extract is slowly evaporated until a thick syrup or paste is obtained. The

paste remains stable for about a year, but in its dry form the product does not deteriorate.

Modern science has added several refinements, chiefly in processes for purifying the crude product. Thus Gold[9] has purified crude curare by first dissolving it in alcohol; removing the alcohol by evaporation and taking up the residue with water. Then acetone is added to the aqueous solution until precipitation occurs. The precipitate is inert. Roberts and his associates[10] found that when commercial curare is added to liquid ammonia inert material amounting to over half of the curare passes into solution, leaving the active principles undissolved. When the active fraction, the portion insoluble in liquid ammonia, is treated with an equal weight of glycine it becomes more soluble in water and less toxic and its action is said to become stronger and more prolonged.

Pharmaceutical solutions of curare are available for medical use. The most widely used of these preparations is supplied in ampoules for parenteral injection containing the equivalent of 20 mg. of standard curare per cc. Marquandt,[11] working with a European brand of curare solution, has reported that such preparations can be kept clear and stable by the addition of 1 to 2 per cent of ascorbic acid. According to Bennett,[12] an aqueous infusion or a hot alcoholic extract of the drug is stable and is not destroyed by autoclaving.

Much remains to be learned concerning the chemistry of curare, and according to Goodman and Gilman,[2] it appears that the curariform action is independent of detailed chemical structure since many other agents possess curare-like potency. Of course, many attempts at separation of the active principles and individual alkaloids have been reported in the literature[13, 14, 15, 16] and some of these methods have been patented.[17, 18, 19] Nonetheless, progress in the isolation of individual alkaloids has been slow, even though curarine, one of the most important, was separated in crystalline form as far back as 1864.[3] In 1935, King[20] reported the isolation of a highly active crystalline alkaloid, d-tubocurarine, from a sample of tube curare of unknown botanical origin. Last year, however, Wintersteiner and Dutcher[21] cleared up the mystery by securing a good yield of this alkaloid from curare prepared from a single plant, *Chondodendron tomentosum*.

For clinical use, according to Watter,[22] only curarine and tubocurarine are suitable. They are very similar in their physiological actions and are free, at least in therapeutic doses, from damaging effects on the heart and lungs.

Without going into details on the well-established[2, 23, 24] and somewhat involved physiological action of curare, it may be said that on parenteral injection curare acts as an autonomic blocking agent which acts mainly on skeletal muscles through a selective depression on their receptive mechanism. In other words, the typical curare action, according to Griffith,[25] consists essentially of an interruption of nervous impulses to muscle. This blocking action is first observed on the muscles of the fingers, toes, eyes and ears, followed by those of the limbs, neck and trunk and, finally, those of the diaphragm.[22] In moderate doses there appears to be no effect on cardiac or involuntary muscles, and consciousness and sensibility are not affected. Curare has no anesthetic action.

These effects are obtained with purified and standardized curare, but crude products produce various other unpleasant and dangerous effects; this depending to some extent upon the type of curare used. Nonetheless, curare is a potent and dangerous drug that requires careful control in its use. Since the diaphragm and the intercostal muscles are the last to be affected, respiratory arrest may occur as the end result of a large dose. However, the action of curare is transient and the paralysis may readily be overcome in most cases by artificial respiration. Fortunately, an efficient antidote to curare is found in prostigmin, a drug allied to physotigmine. An ampoule of this drug is advisedly kept near at hand during curarization.

Curare is effective only on parenteral administration. Given intravenously its effects are almost immediately noticed, but when given intramuscularly the results are not attained for several minutes, generally about fifteen minutes. Curare is comparatively harmless by mouth, and gastrointestinal absorption is insignificant in view of the more rapid degree of detoxication than

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COURTESY GENERAL MOTORS

HAND PROTECTIVE CREAMS

ONE of the things attributable to women in heavy industry is the appearance of the industrial hand protective cream. This seems to have enjoyed a great success and it will undoubtedly continue to be sold for the same purpose at the war's end. Men have scorned the use of any protective agency when they have dealt with lubricating oils and heavy greases. Ordinarily they would wash their hands as best they could and ignore them if they still looked grimy and soiled. Women as we all know could not put up with any such condition and therefore the advent of the protective hand cream for industrial use.

The best known product of this type is a cream which consists of glycerine, water, soap and sodium silicate. When formulated in their proper proportions the final product is a heavy cream which may be rubbed on the hands in a fairly thin film. The sodium silicate serves as an excellent binder and stiffener. All of the components are grease and oil repellents and therefore any industrial material having an oil as a vehicle would not penetrate. In addition to the lubricating oils and greases mentioned above this category would also include paints, asphaltic compounds and any of the oils, fats and waxes. The components of a cream of this type would all be easily miscible with water and the protective film would be removed by simply washing with

water. The product therefore enjoys the necessary attributes for which it is intended. Primarily it keeps greases from penetrating to the skin and secondly it may be easily removed when it is no longer needed.

There seems to be a demand at the present time for a protective cream which has a reverse effect—that is a water protective agency. Greases as such, though they will repel water and materials in which water is used as a vehicle, cannot be successfully used as such because they too would be difficult to remove by the ordinary means usually available. A product of this type may be formulated by the utilization of a number of principles which are commonly used by cosmetic manufacturers.

A water-in-oil emulsion when applied to the hands may be used as a water repellent. In this type of preparation the water is in the internal phase of the emulsion and protected by the oil in the external phase. These creams, however, are capable of absorbing water until finally the emulsion breaks and destroys the protective properties of the film. The added incorporation of a substance such as zinc stearate or other metallic soap would greatly enhance its water repellent properties, but certainly could not be used with too great a success if it is continuously subjected to immersion in water. These creams also do not dry easily since the outer oil phase hampers the evaporation of the water. They therefore cannot be expected to apply easily and then leave a film which is difficult to remove by ordinary abrasion.

The oil-in-water creams where water is in the external phase usually are easily washed off by simply immersing in water. However, they can be formulated to produce a film which is quite impervious to water after application and subsequent drying. A good example of a product possessing properties of this type is the mascara. It is applied as a cream since that is what is formed when water is added to the cake and rubbed. After application and drying there are enough waxes in the product to exert a protective effect on the soaps and prevent their being washed off by contact with water. There are other agencies which may also be used. Caseinate salts easily incorporated in an aqueous vehicle dry down to hard impervious films which are not removed by contact with water, but may be removed by the use of soaps. There have appeared on the market recently some hydrocarbons of the polyethylene polymer variety which in addition to having a high degree of water repellency also has the additional advantage of being very sticky and therefore highly adhesive to the skin. Substances of this type though more resistant to lending themselves to emulsification than mineral oils, may still be incorporated in creams and be used as a water repellent successfully. Care should be taken in the amount of these materials used because, if they are present in too high a percentage, they become impervious to removal by soaps also.

There are a large number of creams and lotions available to women as hand protective agencies against the milder ravages of ordinary housework. The hand lotions on the market appear to be the old standbys and seem to do their job effectively. Generally speaking these products have incorporated in them both an oil repellent and a water repellent agent—glycerine on the one hand and beeswax, spermaceti or petrolatum on the other. They will protect the hands if there is only a small amount of dishwashing to do but cannot be expected to stand up against the greater ravages encountered in industry. They represent one of the largest selling single class of items in the cosmetic market.

They consist usually of a soap as an emulsifying agent, beeswax or spermaceti or both, glycerine, alcohol in an aqueous vehicle. A gum is also added as a thickener and in many cases a stabilizer insofar as the emulsion is concerned. The soaps cover the whole range from castile soap down to triethanolamine and ammonia soaps. These may be mixed together in the same product to produce some sought after effect. Some of the lotions also have incorporated in them a small amount of lanolin to make for greater emolliency. The properties which they all seem to have in common are to be easily applicable and to produce a film which does not feel greasy. None of the well-known brands, for example, will produce an oil stain on paper after application to the hands and pressing on a piece of paper. Most women will testify to their efficacy and their value as a hand protective agency.

No attempt will be made at this time to present formulas, since they are fairly well known. The reader who may be interested is asked to refer to any standard book on cosmetics which contains a number of tested and well thought of receipts.

Another cream used as a hand protective is the vanishing cream or hand cream. This cream has a multitude of uses since it is also commonly used as a powder base, applied before make-up is used so that the powder and rouge may adhere to the skin for a greater length of time. Vanishing creams are usually made from a potassium soap and an excess of stearic acid which provides the pearly luster on standing in which has also been incorporated some glycerine. A typical formula for such a cream follows:

Stearic Acid	18.0%
Potassium Carbonate	1.0
Glyceride	5.0
Water	74.0
Perfume	q.s.

Other materials may be included and certainly substitutions have been made particularly in the case of the glycerine where, due to the glycerine shortage, propylene glycol was used. Mineral oil may also be used but care should be taken that no "rolling" effect is produced by its introduction. The amount of glycerine used also will in a large measure determine how well the cream will withstand the tendency of the water to evaporate and dry the cream. Lanolin may also be used, but the amount must necessarily be small since it would otherwise have a tendency to cause the

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GLASS — WITH CARE

There is nothing unusual about this line on a shipping case filled with glass containers. But when that case comes from Carr-Lowrey, it takes on a special significance.

In this fifty-five year old organization "handle with care" has long been a rule and a habit. It starts with the mixing of raw materials. It is carried through every operation. Step by step to the finished glass container, every detail is handled with painstaking care by workmen jealous of their reputation for making top quality glass.

Perhaps that is why Carr-Lowrey has long been the choice of so many of the foremost manufacturers of drug, cosmetic, household and food products. If you, too, are especially particular about quality, we invite your consideration.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD. • *New York Office:* 500 Fifth Avenue • *Chicago Office:* 1502 Merchandise Mart

Packaging and Selling

Success School

Even in a business where skyrocketing successes are quite common the Du Barry Success School is really something to reckon with. Sometimes it almost seems as if the tail is wagging the dog, for five years ago when the Success School was started, the DuBarry line was pretty much in the doldrums. Trade estimates vary but a charitable estimate would probably not set the sales figure at that time at more than one and a half or two million. This year, the DuBarry line will do in the neighborhood of eight million and qualified observers are giving a large share of the credit to the School.

Although Arden pioneered with the body stuff in her salons twenty-five years ago or more and has rolled up some pretty impressive figures on exercise, massage, etc., it remained for the Success School to find the formula which made it Big Business. For example, the latest figures on the correspondence school or Home Success Course, indicate that some 165,000 courses have been sold at $23 per course. You don't have to be an Einstein at figures to see that that's pushing $4,000,000 in just three years since the correspondence courses were started. As the thing has been snowballing at a tremendous rate it's not impossible that 100,000 courses will be bought this year or about $2,000,000 worth. The in-person courses have the physical limitations of space to contend with but, even so, the School puts on three shifts a day, say 100 pre-success trainees, at rates of $40, $80 or $200 per course, and keeps none of them for more than six weeks, unless, of course, they want to matriculate all over again. And the waiting list is said to be fantastic.

To get back to cosmetics, one of the things that goes with the course, whether by mail or in person, is a complete kit of DuBarry preparations and, of course, complete instruction in how to use the preparations. Naturally, the DuBarry distributors weren't too pleased with this for it meant a direct sale in which the dealer did not participate. On the other hand, it was the DuBarry claim that this served merely to introduce new users to DuBarry, that it was a high-class sampling job, so to speak, and that the dealers would get all the repeat business. Now to clinch that story, DuBarry has conducted a survey and is telling DuBarry dealers via Beauty Fashion that "thousands of women were converted through the course to DuBarry . . . . thousands of women who had used only a few basic preparations . . . . learned the advantage of using these co-related beauty preparations . . . . became regular users and buyers of DuBarry.

"In one over-all figure, the Success Course had taught students to use additional preparations up to 48% more than they had formerly.

"Women everywhere have heard of the success school. Which helps explain the potency of the magic phrase 'As used in the famous DuBarry Success School' in merchandising and selling the entire DuBarry line."

Beautify and IDENTIFY

YOUR PRODUCT IN ONE FAST, LOW-COST OPERATION

and keep them beautiful and smartly identified right up to the point of re-purchase . . . with Meyercord Decals. Available in any design, size or colors, Meyercord Decals offer hand-painted effects at a fraction of the cost. And because they're washable, durable and alcohol-proof, they *keep* your product name permanently fresh and bright. Easily applied at production line speed to glass, wood, pottery or metal, on smooth, crinkled, flat or curved surfaces—Meyercord Decals are the smart, modern method of product identification. Give your products new eye-appeal and buy-appeal. Identify and beautify them with Meyercord Decals. Address inquiries to Dept. 14-10.

Illustration of Jaquet products, decorated and identified with Meyercord Decals, courtesy of Jaquet, Inc., New York, N.Y.

Meyercord Decals

THE MEYERCORD CO., CHICAGO 44, ILLINOIS

Chain Stores Post-war

The intelligent use of space and trained salesgirls are the two most important cosmetic problems of drug chains in the post-war years, according to Joseph Keho, president of Dorothy Gray. Speaking before the Associated Chain Drug Stores, Mr. Keho said that, "The war and the emergency which put 12 million men in the armed forces, thousands of women in uniform and 6 million extra women in industry in highly paid jobs has forced much extra volume in toiletries into your stores. With the end of the emergency you will be confronted with the question. . . . 'How are you going to keep this extra toilet goods volume, lay the foundation for greater toilet goods business and still find space for the many sundries which in a great many of your stores formerly occupied the space now given to your expanded toilet goods department?'

"You don't have to wait for the end of the war to study this red-hot question. You may say 'condense the toilet goods—put the sundries back.' But is this the advisable and most profitable move? An electric toaster or curling iron or any metal gadget you may display takes up relatively larger space than toilet articles of the same value. You sell such a gadget once and the consumer expects it to last for years or gets sore if it fails.

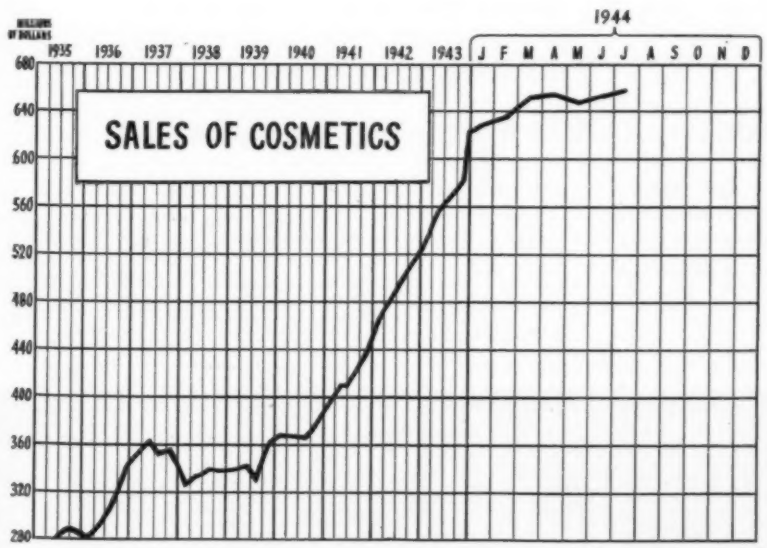
"Toilet articles are used up faster than any other item you sell—except food and tobacco, and your customer uses many toilet articles and comes back again and again if pleased with your personnel and service.

"I think your top toilet goods problem is going to be space and the intelligent use of it.

"And your employees must be friendly and alert and this is your problem number two. The individual registered druggist occupies in most customers' minds a position right next to their doctors. In too many chain stores the registered druggist today stands scowling behind the prescription counter when not busy and if you get him out and ask him for a tube of tooth paste, he waves his hand haughtily towards the toilet goods counter. As you sidle up the aisle you may think better of it, seek the nearest door and buy elsewhere. What do you think that does to a woman customer who might like advice concerning skin care and to whom you might sell five or six items? I have seen this happen—it is not supposition. With the end of the emergency your greatest problem will be to correct the God-awful sullen attitude of many over-worked sales people that exists now and to re-educate them to offer smiling, constructive sales help . . . . whether it be behind the cosmetic counter, in the drugs or at the fountain. This can be started without waiting for the end of the war.

"Some of you now have and all of you need a toiletries department supervisor possessed of a knowledge of skin and skin care as comprehensive as that which you demand in your Prescription Department of your registered druggists, so that sales people may be trained to give intelligent and accurate advice in a friendly manner to women in your store. These women may be patronizing the soda fountain or your candy department and be attracted by a nice display of toiletries. Cosmetics do sell on sight. To educate, or perhaps more accurately to re-educate, your sales staff of girls and men as they come back is a big job but it will pay big dividends.

"Don't be afraid to keep on selling better quality merchandise and high-priced toiletries after the war . . . . but have your price range adequate. Show plenty of medium priced merchandise as well as high priced goods. Don't frighten customers away by showing only high priced goods."



Retail sales of cosmetics for the twelve months ended with July totaled $657,506,000. This compares with $653,476,000 for the twelve-month period ending with June, and with $563,155,000 for the twelve-month period ending with July, 1943.

Packaging Institute

The Packaging Institute will hold its annual meeting at the Hotel New Yorker, November 1 and 2.

French Perfumes

One of the conversation pieces during the war has been the post-war place of French perfumes and the corollary—what becomes of all the new entrants (American) when the French products return in volume. The accurate answer is anybody's guess although the prevailing hope seems to be that purchasing power will be maintained at such a high level that everyone will do a good business. What is certain is that nobody seriously questions the ability of the French lines to resume their accustomed place whenever they are ready to do so.

One of the first reports to come out of France on the subject appeared in the N. Y. *Times* of August 31. Tania Long, that paper's correspondent, in a piece dealing chiefly with fashion and based upon her own observations plus an interview with Lucien Lelong, had the following to say about cosmetics and perfumes.

"France has not suffered much from the shortage of cosmetics and women are well and carefully made up. There is still, according to M. Lelong, a fair amount of alcohol and perfumers are still able to produce good perfume and as soon as exports are permitted the Parisian cosmetic manufacturers will have many new perfumes and cosmetics to send overseas."

Shatterproof...Seamless—

-and therefore- BEST *for* POCKET *or* PURSE *use*

Clearsite*

CONTAINERS provide full-time protection for your product at all times. Whether its contents were primarily intended for stay-at-home use; for train, 'plane or outdoor use —it *should* survive handling!

FEATHER-LITE.... COLORFUL.... LABELED IN PROCESS OF MANUFACTURE

CLEARSITE *is* better-looking—it is also resilient, sturdy, and withstands use or misuse which would ruin the old type of bulky and breakable containers. That is an important consideration when you serve a nation that is "always on the go."

***Registered U. S. Pat. Off.**

Hundreds of items used as daily requisites *need* the protection of CLEARSITE. They'll soon recognize that products packed in CLEARSITE, stay with them until consumed!

Our Package-Engineering staff will gladly collaborate with you!

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

EXTRUSION AND INJECTION MOLDERS

60 AVENUE L NEWARK, N. J.

WEST COAST REPRESENTATIVES. CONTAINER SERVICE CO., 1266 North Western Avenue, Los Angeles 27, Cal.

New Perfumes

New perfume presentations which have been few and far between during the last year seem to be popping everywhere. Last month Charbert made news with its "Fabulous," and Parfums d'Artimon, a new name in the field, launched its "Blue Peter" perfume. Vita Ray has stepped into the realm of perfumes with its "Gallivanting," which retails at $6.50 for a half ounce. Gallivanting is advertised as a new type perfume, concentrated essence, with the slogan, "A tiny touch lasts all day." Alexa, a new name in perfumes is presented by Martin de Markoff. The first fragrance under Alexa is called "Enigma," dramatically packaged in a shiny black bottle with white design. Enigma retails at $15 for six drams, $30 for two ounces, and there is also an introductory size at $3. There is also a light version of Enigma—four ounces for $7.50 and 12 ounces for $18.

Jean Nate, known for many years for "Pour le Bain" friction lotion and other bath products, has introduced "1-4-3," a combination of numerals which is supposed to convey "I Love You." It is made in one size only, 4/5 of an ounce to sell for $7.50. Another new name is that of Maupassant Parfums with its "Thou Shalt Not" perfume in two sizes, ½ ounce at $7.50 and 1 ounce at $14.50, and Thou Shalt Not Au Parfum, a highly concentrated toilet water also in two sizes, 2 ounces for $2.50 and 4 ounces for $4.50. Parfum Anjou with its "Devastating" perfume is a new name, but it has an old established house behind it. Devastating retails at $1.75 for ½ oz., $5.50 for ½ ounce, $10.50 for 1 oz., and $20 for 2 ounces.

In the lower priced brackets come such names as "Jealousy" by Blanchard, and "Shameless" by Nadair. Jealousy retails at $3.50 for a half ounce. Shameless, described as something between a toilet water and a perfume retails at $2 for two ounces, $3.50 for four and $6.50 for eight ounces.

And there are others, and probably still others to come. The question then arises whether there is room for all. In today's market they can perhaps all make good but post-war it will undoubtedly be the survival of the fittest!

Add Post-War Packaging

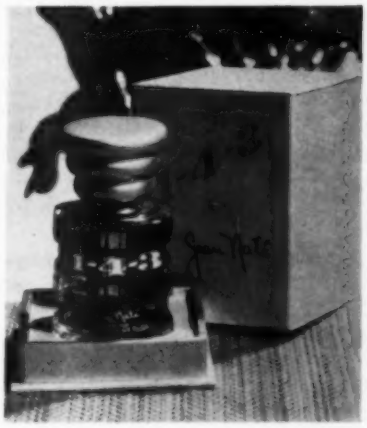
Under the title "Packaging Looks Back and Plans" in the July issue of "Scope," a British publication, Edward Richardson writes with clarity and ability of post-war packaging prospects. He says that, "We are unlikely to go back to the intolerable variety of sizes which multiplied difficulties without bringing advantages before the war. The standard capacities of tins and tubes, if not of bottles, will be retained. A piano has only a fixed number of notes, yet the pianist can produce an infinite number of variations from them. Similarly, the designer of packages can produce an infinite variety from a restricted range of sizes of containers. Packs which mislead the customer, suggesting a greater capacity than is actually the case, will not be so prevalent as formerly.

"There is nothing yet to beat the collapsible pure tin tube for certain products. Plastic tubes are very beautiful, and may prove practical and economical if an effective method of closure can be developed either by some form of crimping or by heat sealing.

"Glass is the oldest plastic, and is still young. Our designers and manufacturers still have a great deal to learn about its properties and the best shapes to develop. As a plastic, glass should be designed to flow: a glass container should look as though derived from a bubble. But glass can also be cut, like crystal. Certain glass containers may look as though they were not blown as bubbles but cut from the solid. There must be no confusion between the two methods, however. The glass must be bubble-like or crystal-like, but not both! The natural surface and shape of blown glass should not be destroyed by the thoughtless uses of ribs, panels, and lines.

"There will still be good uses for tinplate, for, in normal times, it is cheap, portable, and not easily broken. It can be printed clearly (plastics and glass cannot usually be printed either so easily or so clearly).

"Plastics will be better in color, less liable to fracture, and more resistant to light and moisture. They will be cheap when made in large quantities, but initial mould charges will be heavy. The material itself will probably continue to be more expensive than glass,



so that large plastic mouldings will cost a good deal more than small ones, while large bottles do not cost so much more than smaller sizes. Plastics may still be ruled out on cost for many purposes. We have not yet seen plastic jars and bottles which pass all moisture-and chemical-resisting tests. Their surfaces often feel too smooth to give the user pleasure, and for certain purposes they lack weight. They are easily knocked over and fail to give the sense of costliness or luxury which we associate with heavy glass or metal.

"Cellophane wraps will come back as a protection and, in some cases, as a decoration. But they will no longer be novel. Sales managers will no longer demand that it be wrapped in transparent cellophane, however unsuitable this finish may be. I think we shall come to a common-sense usage of this material.

"Some day someone will invent a really satisfactory pourer neck for screw-capped bottles, which will not demand a closure of extraordinary dimensions. It will pour well, without dribbling. Someone will grasp the obvious fact that bottles and caps should be designed not only to fit each other mechanically, but also to harmonize in appearance. One day bottle manufacturers will make their own closures as a matter of course, and not leave the packer to act as umpire between the conflicting tendencies of bottle makers and closure makers. Some engineer will discover that metal closures are not only meant to be put *on* to bottles, but also to be taken *off* again—often by women with weak wrists. Then we shall see the end of the 'Can you open this salad cream for me, please? I have hurt my wrist with it' problem. Sales people will at long last agree that most leaflets and insertions, which used to be stuffed into cartons at their request, have some value as protection for the contents, but little as publicity. The public rarely reads them, unless they are *direction* inserts.

"And will the cartons come back? I think they will. Cartons are protective, they facilitate parcelling and stacking; they have good display value; they help to carry wording which would otherwise overload the labels or containers—as we have seen during the period when we have had to do without them.

"After the last war, we had cubism, leading to functionalism. We had not only the shedding of all superfluous ornament, but also the stripping away of all ornament whatsoever. We reduced everything to basic shapes and eliminated all 'natural' forms (i.e., forms derived from growth, such as those based on plants and on the human figure). We had what came to be called 'streamlining,' and often we had it just for streamlining's sake. We streamlined our railway engines, for example, although I doubt if they went any faster, or if we sold any more because of it (and we left our railway stations in the condition of nineteenth century urinals!). We had a drift away from femininity, mirroring the effect of the war, the faster pace of life, the development of mechanization and of speed, and the emancipation of women.

"I prophesy a slight swing back. Having slashed off the unessentials and got down to the bare bones of construction, we can now move forward again. Our men and women in the Forces and in war-time industry will have had a bellyfull of regimentation, of uniforms, and of colorless life. I think decoration will come back. I am sure femininity, charm, and daintiness will be seen again. I think we shall try to show that in the post-war world there is more than machines and waste land.

"Wootton said that architecture should embody 'commodity, firmness, and delight.' That is, in modern jargon, 'functionalism, constructional soundness and durability, and appeal.' We have been getting down to functionalism ever since 1914, with an acceleration since 1939. We are learning about sound construction every day. But we have neglected *delight*. Packaging, like architecture, must satisfy all aspects of the human outlook, if it is to be perfect. It is a *function* of packaging not only to be *mechanically* functional, but also to satisfy that part of our make-up which requires delight (or joy, or glamor, or thrill—you can use which word you like, according to how much you want to water the idea down to suit the prevailing anti-highbrow prejudice). We shall see more of this *pleasing* aspect of packaging after the war."

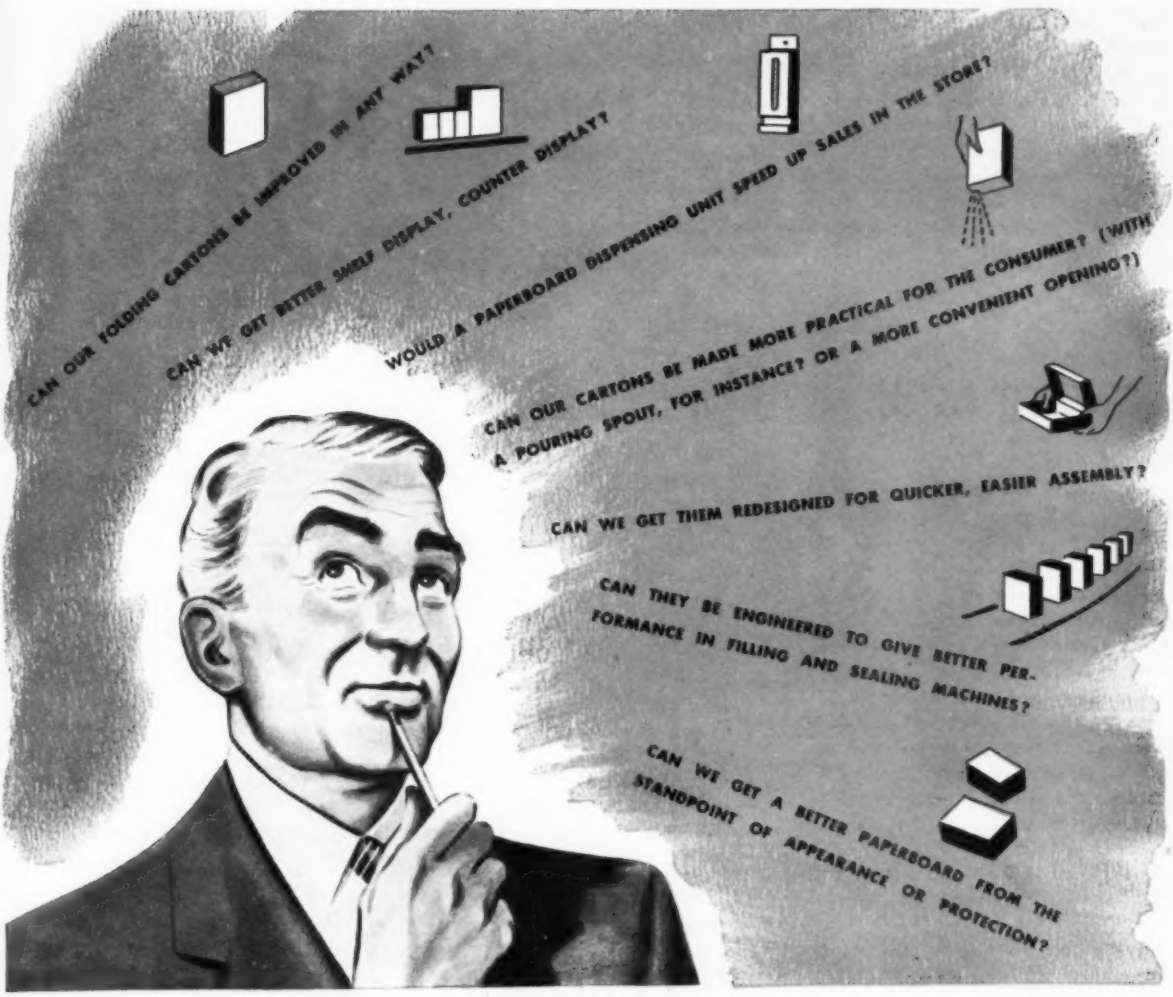
The Cosmetic Trend

Recently published Dept. of Commerce statistics covering the American consumers expenditures for a large number of products, habitually sold in department stores, are making buyers of cosmetics and drug items wonder whether they have had such a perfect share of their market as they fondly believed. An analysis of these figures shows that cosmetics participated proportionally, to an extent of 2.8% in their sale in 1939 and 2.9% in 1942, for the nation as a whole, and drugs, etc. with 3.3% and the same proportion in 1942. To use the common classification employed by department stores in making their departmental sales analysis, "Toilet articles and Drug sundries" this means that the nation's consumers spent 6.1% of their purchases on these items in all the nation's retail stores in 1939 and 6.2% in 1942 while, and here is the rub, the corresponding proportion of "per cent to sales" for the department stores was only 3.3% in 1940 (the earliest year for which these figures are available) and 3.2% in 1942 (3.3% in '43).

To compare 1941 cosmetic sales with 1942, national volume rose 20.6% and those of drug preparations and sundries 13.9% while the department stores added 13% to the combined group. The findings are those of the Controller's Congress annual report. The sales increase from 1942 to 1943 was 18% for all the analyzed stores with volume in excess of $500,000. The larger store organizations did generally better than the small ones; those in the $5,000,000 to $10,000,000 group turning in the best performance with a rise of 31%.

The point that is made in department store circles is that all-over department store sales may rise to a figure approximately 75% in excess of 1939 during the remainder of the year and into 1945, and that, with probable declines facing them in such items as women's and apparel accessories and several others which, together, have accounted for near 60% of the war-time sales of the stores, they should not run behind other retail groups in such an important item as drugs and toilet goods.

Reports from the Christmas front are that sales of men's items have had a good start for oversea mailing in the early part of September and that the outlook is good for the remainder of the season.


CAN OUR FOLDING CARTONS BE IMPROVED IN ANY WAY?
CAN WE GET BETTER SHELF DISPLAY, COUNTER DISPLAY?
WOULD A PAPERBOARD DISPENSING UNIT SPEED UP SALES IN THE STORE?
CAN OUR CARTONS BE MADE MORE PRACTICAL FOR THE CONSUMER? (WITH A POURING SPOUT, FOR INSTANCE? OR A MORE CONVENIENT OPENING?)
CAN WE GET THEM REDESIGNED FOR QUICKER, EASIER ASSEMBLY?
CAN THEY BE ENGINEERED TO GIVE BETTER PERFORMANCE IN FILLING AND SEALING MACHINES?
CAN WE GET A BETTER PAPERBOARD FROM THE STANDPOINT OF APPEARANCE OR PROTECTION?

How many of these folding carton questions should you be asking, right now? . . .

Better assume that your competitors are asking those questions. Which also means *you'll* not only want to ask them fast . . . but make sure you get *answers* that will make *your* packages the ones with the biggest *plus* after the war.

Gardner-Richardson experience, ingenuity and know-how have produced many entirely new developments in the folding carton field in recent years. Some of them may be the answers you're looking for: new dispensing cartons, new bulk display cartons, cartons with unique click-tops, pouring spouts, automatic lock ends. Today, Gardner-Richardson production is completely sold up. But our creative and technical staffs are ready to tackle the problem of bringing your folding cartons "up to the future." Write, today. No obligation, of course.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

LOOKING INTO THE FUTURE

When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA

Creams of Promise

Slowly but surely, creams boasting an estrogenic hormone content, are making their way into today's cosmetic market. Two new names have appeared on the horizon and there is promise of many more to follow. Bonne Bell of Cleveland has launched "Plus 30" cream, which contains 7500 international units of natural estrogenic hormones per ounce of cream, according to the label. The price is $3.00 plus federal tax for 1-7/8 ounces. Bonne Bell has an interesting selling slogan, "Desirable after thirty—urgent after forty!", and a good name for the product.

From the house of Delettrez comes an estrogenic cream called "Deletron." Deletron, according to its label, contains 5000 international units per ounce of "Scientol" (trade-mark) natural estrogens essentially estrone and estradiol. Delettrez cautions its users: "The development of Deletron is significant for every woman past thirty, and is to be used only by women past thirty, not young girls." The retail price is $3.00 plus federal tax.

There isn't much question about the fact that there is a very definite market for estrogenic creams, but should they be directed to the woman past thirty? It would appear that women in their early thirties or even middle thirties do not need hormones except in isolated cases. A woman doesn't begin to fight sagging skin and throat, drooping contour, dry skin and lines about the eyes until she hits her very late thirties and early forties. Therefore, why not direct these estrogenic creams to the woman forty or over? Altogether in too many cases the younger women who try this type of cream do not get any more results than they would get from any ordinary emollient cream even though they have paid lots more for the estrogenic cream. Results are much more apparent actually and psychologically on the older woman. The market is plenty large enough to direct these creams to the woman past forty.

Photography in Packaging

Jacqueline Cochran has repackaged its Jacologne line for the holiday season. The design is simple—jet black background with large dots in pale blue, some of which are adorned with flowers in natural pastel shades. The whole effect is third dimensional and was undoubtedly done by photography as indicated by the lights and shadows around the floral decor. It might be supposed that poker chips were used to make the large round dots on the first negative and the flowers placed over them and photographed again. In any event, the effect is one of clever photography, and dramatic and effective packaging.

New Competitor?

Snuff Eau de Cologne is Schiaparelli's newest offering to tempt the sterner sex. It supplements Snuff perfume, first in a series of toiletries launched by Parfums Schiaparelli for men some time ago. Snuff Eau de Cologne comes in a handsome eight ounce bottle at a cost of $8.50. The original Snuff perfume comes in a pipe-shaped bottle that sells for $10. It is very possible that Snuff Eau de Cologne is a forerunner of other items to be added to make a more complete men's line so that Schiaparelli will take a competing place in the market of men's preparations.

Brave New World

There won't be any confusion in a woman's mind about what shade to choose when she selects the new Radiance face powder, for the very simple reason that it comes in only one shade. It seems that Radiance face powder was designed "to reveal and illumine" individual skin tone. It was blended to produce the luminous irridescence of mother-of-pearl. The actual shade of the powder is a rose nacre that promises to look soft and transparent on the skin giving the complexion a youthful look. Blondes and brunettes may wear it to accent individual skin tones. It blends with each type of skin, so we are told. Sounds exciting—like all things to all women! Done up in a pale blue satin bag with a Shocking drawstring, Schiaparelli's latest contribution to make-up is tucked into a handsome purple heart-shaped box, decorated by Dali. The price—$6.50 for six ounces—expensive but not extravagant!

OTHER MANUFACTURERS TELL US THEY GET BETTER PRODUCTION WITH YOUR CONTAINERS AND CLOSURES. WHY IS THAT, MR. JARRETT?
THERE ARE A VARIETY OF REASONS

Rigid manufacturing specifications—improved methods—careful specification of raw materials—accurate temperature control in the annealing operation—uniform distribution of material—scientific engineering and design—constant research—the skill of veteran glass workers—those are some of the reasons why Anchor Hocking containers help production for manufacturers who use them. For those reasons Anchor Hocking containers are exceptionally strong, safe and economical to handle, light in weight, yet tough enough to resist the shocks of production, handling and transportation. Anchor metal and plastic caps also contribute materially toward better production records. Among the five easy-to-apply types (Amerseal, C.T., NKCT, Tricon and Plasticap), you're sure to find one or more ideally suited to your production and protection requirements; all provide dependable, airtight and leakproof seals that protect products from evaporation and deterioration until entirely consumed.

"Meet Corliss Archer" every Thursday evening, entire coast-to-coast network CBS

W. A. JARRETT, one of Anchor Hocking's ablest and most popular men, has been a member of the Anchor Hocking family for 15 years.

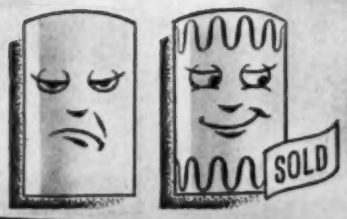
ANCHOR HOCKING

GLASS & CAPS

ANCHOR HOCKING GLASS CORPORATION · LANCASTER, OHIO

What's YOUR Package's S.Q.*

The *Selling Quotient of your present (or contemplated post war) package can be measured!



Here's a quick yardstick—six essential package qualities, rated for their power to help your product SELL!

1	Your package must quickly, unmistakably, identify your product	25%
2	Must be notably "good looking"	25%
3	Must conveniently dispense or protect the product	15%
4	Must be practical—production-planned—economical to manufacture, simple to fill or pack	15%
5	Must be easy to handle, to stack and display	10%
6	Must convey a promise of superior quality within	10%
	MAXIMUM SELLING QUOTIENT	100%

Long experience has taught Ritchie that the four qualities that constitute *good appearance* add up to 70% of a package's ability to help a product *sell!*

How to get a *Better* Package . . . at *Less* Cost

Let Ritchie help you and your package will have the right material and structure for its job. It will be practical, convenient to use. It will proclaim your product identity. It will have displayability. It will be *memorable* and *attractive*. And Ritchie's expanded, war-developed facilities for volume production assure its low cost. Write us today.

Set-Up Paper Boxes
Fibre Cans
Transparent Packages

W. C. Ritchie AND COMPANY
8829 Baltimore Avenue, Chicago 17

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS

TEACHING GLASS TO SWIM

. . . An unusual test that aids research's quest for better glass

ONE of the reasons for the consistently high quality of Armstrong's container glass is a "swimming test" which provides a precise measurement of its density.

In this test, Armstrong's research men make glass "swim" in a carefully blended mixture of unusually heavy organic liquids. They adjust the proportions of these liquids and vary the temperature, until a point is reached at which the glass just floats. From this point, Armstrong's glass chemists can calculate the density of glass to an accuracy of 1 part in 25,000!

With the information received from the test, the men in Armstrong's glass plants are enabled to maintain an unusually high degree of control over the density of the glass they produce . . . an important factor in its quality. Accurate, painstaking laboratory tests like this one, carefully and completely coordinated with actual production work in the plant, are one of the important reasons why Armstrong's glass is, and will continue to be, top quality.

For other interesting side lights on the skill and experience that go into the making of fine glass, send for your free copy of Armstrong's illustrated booklet, "Men and Glass." Address Armstrong Cork Co., Glass and Closure Division, 3810 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS

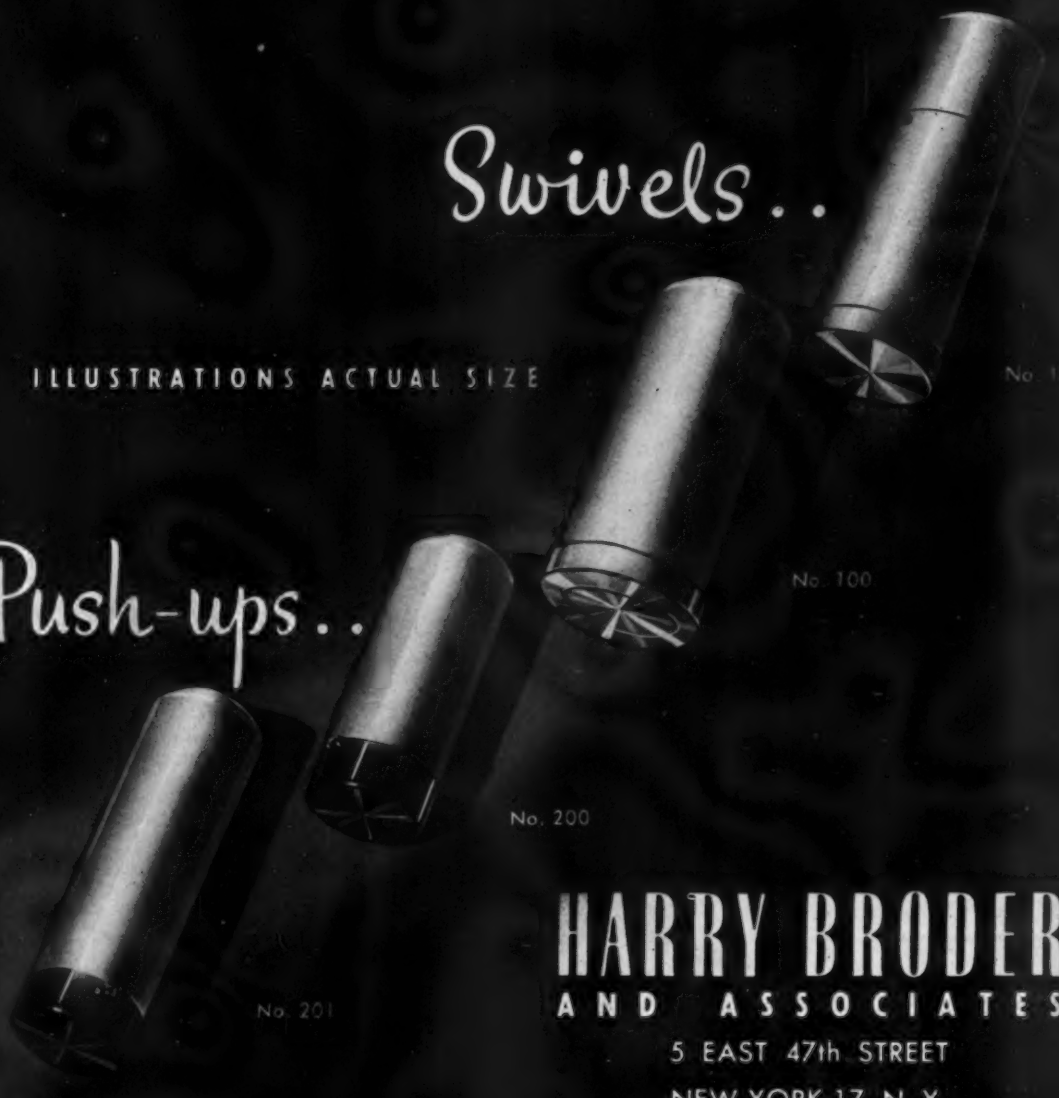
and **ARMSTRONG'S CLOSURES**

GAIR BY AIR
SAVES WEIGHT—SAVES SPACE
SAVES PACKAGING COSTS
To the land of the Totem Poles — flying time's from dawn to dusk. Because weight is a first consideration Gair containers and corrugated boxes play a vital part in overland and overseas shipping now and for the future. Gair by Air means maximum cargo at minimum tonnage. Write for bookler "Air Cargoes."
GAIR
For large users—booklet on the Palletized Load, illustrated with official photographs.
SAVE WASTE PAPER
FOR WAR PRODUCTION
ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO
Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers

All Plastic
LIPSTICK CONTAINERS

Swivels..

ILLUSTRATIONS ACTUAL SIZE



Push-ups..

HARRY BRODER
AND ASSOCIATES
5 EAST 47th STREET
NEW YORK 17, N. Y.
PLAZA 8-0520

WIRE OR WRITE FOR SAMPLES

RECISION-MADE for dependable sealing

It has long been Crown's policy to produce the finest metal closures that can be made. The user satisfaction resulting from this sincere objective merits the careful consideration of all who buy closures for fine cosmetics.

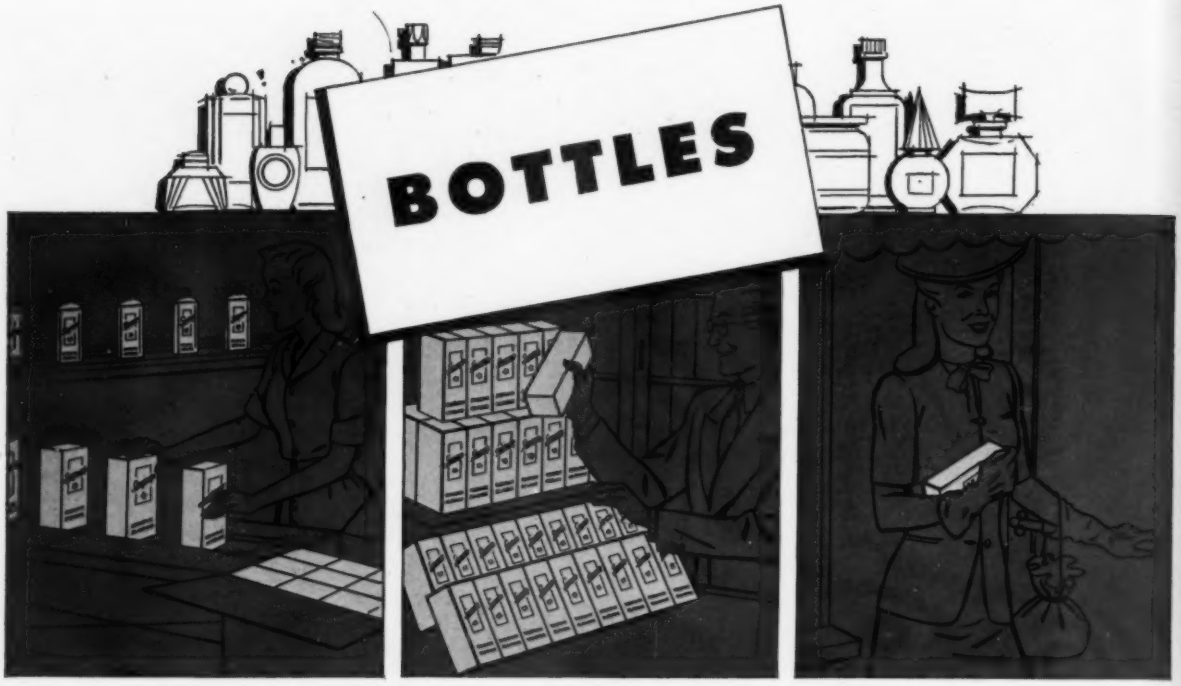
Experienced closure buyers know it pays to entrust your requirements to a qualified specialist in this line. Crown's vast fund of specialized knowledge and high manufacturing standards have made this company "sealing headquarters" for those who know and appreciate the meaning of quality in closures.

CROWN CORK & SEAL COMPANY

Closure Division • *Baltimore-3, Md.*

WORLD'S LARGEST MAKERS OF METAL CLOSURES

CROWN CLOSURES



ARE SAFEST—DISPLAY AND SELL BEST IN

• • • FOLDING CARTONS

Bottle users put protection first in folding carton advantages — but remember, too, the values in rectangular containers — such as less shipping space — smaller unit counter space — more efficient shelf display and stacking. From the sales angle you'll approve the large, visible label — the easy to wrap and carry feature — the bright, distinctive identity.

Bottles in folding cartons of Ridgelo Clay Coated Boxboard gain in appeal from manufacturer to consumer. Weigh the cost too—and plan on a profit-making change to Ridgelo quality in your folding boxes.

KEEP DOING YOUR SHARE IN THE WASTE PAPER CAMPAIGN

Ridgelo
CLAY COATED
BOXBOARDS
Make a lot of difference—FOR A LITTLE
MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

Representatives: Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

"Duraglas—Prints"

give you glimpses of the future

● The old blueprints won't do for the future.

They do not show the shape of coming events.

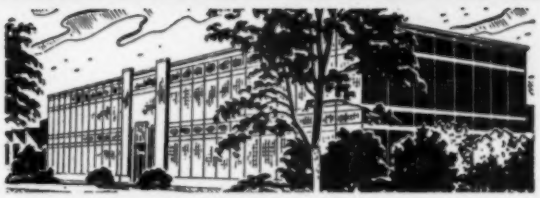
But, a Duraglas print reveals that the trend toward the greater use of glass containers keeps right on growing—that the special utilities of glass containers for many products gain wider and wider recognition.

Duraglas containers have long protected drugs, pharmaceuticals, proprietaries and household products on their way to market. They provide visible inventory as well as convenience in use and truly background the label which identifies well-known products.

Duraglas Customer Service adds four distinct values to Duraglas containers: Quality Control, Packaging Research, National Advertising, Merchandising and Sales Promotion—as only Owens-Illinois has developed these glass container services.

Let us show you how our service can help you if you have a packaging problem. Just write us at Toledo to arrange a consultation.

OWENS-ILLINOIS GLASS COMPANY
TOLEDO, OHIO



1. America's most completely equipped container research laboratories—located at Toledo, Ohio and San Francisco, California.

2. The "know how" resulting from more products going to market in Duraglas containers than in any other brand of glass.

3. Twenty strategically located plants with the most modern production facilities.

4. Duraglas Customer Service from the production line to the consumer's mind. Quality Control . . . Packaging Research . . . Merchandising and Sales Promotion . . . National Advertising in leading magazines reaching millions of men and women . . . Fred Waring and his Pennsylvanians—Blue Network, Coast-to-Coast.

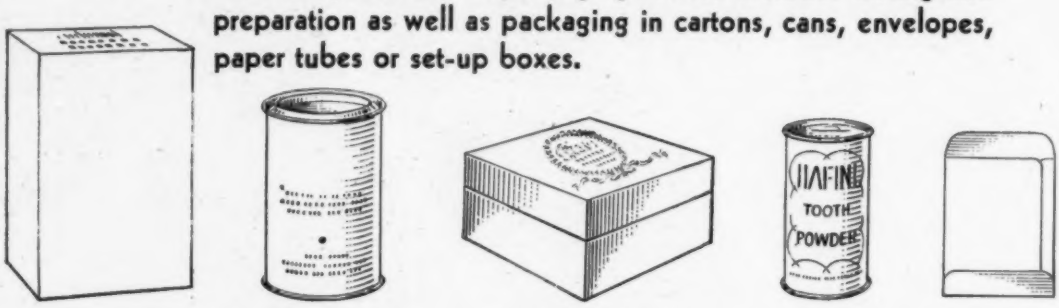
Duraglas
CUSTOMER SERVICE

All designed to help you sell your products in Duraglas containers.

Yes Sir!
We Can Package Them For You

Open capacity now available on High Speed Automatic Machinery for packaging dry powders - drugs - cosmetics - chemicals.

Our complete custom packaging service includes mixing and preparation as well as packaging in cartons, cans, envelopes, paper tubes or set-up boxes.



The Stevens-Wiley Manufacturing Co., Inc.

Hancock, Palethorp & W. Berks Streets, Philadelphia 22, Pa.

Phones—Regent 1616-1617

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE *BRIDGEPORT* METAL GOODS MFG. CO.

Established 1909

BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

Unmistakably Yours,

An Aridor designed and lithographed cap adds the finishing touch . . a *distinctive* mark of identification to your package. As in the case of the G.E. packages pictured here, a cap "EYE-Dealized" by Aridor is *Unmistakably Yours!* It carries your banner on high, out front, creating favorable recognition regardless of the quantity or character of its shelfmates. Let Aridor suggest impressive identification for *your* package. Send along your present package, today.

The ARIDOR Co.

3428-40 WEST 48TH PLACE - CHICAGO 32

A Division of Ball Brothers Company

YOUR PRODUCTS SHOULD BE *SEEN* AND NOT HURT

FOR POST-WAR DISPLAY-PROTECTION DEPEND ON LUSTEROID VIALS AND TUBES

Here is a proved method of packaging that does two vital jobs in one:

1. LUSTEROID displays your product through its crystal-clear walls for eye and buy appeal.

2. LUSTEROID's strength and rigidity protect your product from harm in shipment, at point of sale and in use.

But that's only part of the LUSTEROID story! This light-weight plastic saves time, work and money. Its inherent strength eliminates the need for protective packing in shipment. Its "printability" means no labels to affix. Its colors—clear or opaque—give you all hues of the rainbow to work with. Sizes from ¼" to 1¼" in diameter—lengths up to 6". Cork, slip-on or screw-cap closures.

Write for post-war details now.

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory

10 W PARKER AVENUE, MAPLEWOOD, N J

MAILING ADDRESS SOUTH ORANGE, N J

Plastics by Kurz-Kasch ...Salesmen for Cosmetics!

CHECK display value! Check unit costs! Check sales appeal! There's no argument that cosmetics in plastics move with more speed and more profit.

And there's no argument that cosmetic packaging by Kurz-Kasch stands out. We invented the screw-top plastic rouge box—and since then, cosmetic manufacturers large and small have come to us for all types of containers. For stock molds or individualized, high-styled custom jobs, it will pay you to see Kurz-Kasch first.

SAVE waste motion and loss by consulting the molder who knows cosmetic packaging best. Right now we can help you plan post-war packaging for cream rouge, dry rouge, mascara, face powder or lipstick. Your inquiry involves no obligation.

THERE ARE STILL WAR BONDS TO BE BOUGHT . . . LET'S BUY 'EM!

Kurz-Kasch

For over 25 years Planners and Molders in Plastics

Kurz-Kasch, Inc., 1421 South Broadway, Dayton 1, Ohio

Branch Sales Offices: New York • Chicago • Detroit • Indianapolis
Los Angeles • Dallas • St. Louis • Toronto, Canada

Export Offices: 89 Broad Street, New York City

STAINLESS STEEL STOCK POTS

ALL SIZES
5 to 50 GALLONS

READY FOR
IMMEDIATE SHIPMENT

IDEAL for STORAGE and PROCESSING PURPOSES

These are heavy duty vessels fabricated from 16 gauge, 18-8 Stainless Steel, Welded construction, with all inside welds ground smooth and polished. You will find many applications for these stock pots in your plant as they are very handy for storing and processing chemicals and drug materials. Will not rust or corrode and are very easy to keep clean.

SPECIAL EQUIPMENT

These stock pots are available with or without covers and may also be equipped with special casters if desired for moving them around your plant.

WRITE FOR COMPLETE SPECIFICATIONS AND PRICES

We also manufacture a Complete Line of STORAGE TANKS and EQUIPMENT.

METAL-GLASS PRODUCTS CO. Dept. D Belding, Mich.

For Sale--Immediate Delivery
Bakelite Caps!

500,000 Black or Pink 8mm.
250,000 Red or Black 10mm.
250,000 Red, Ivory or Black 13mm.
500,000 Colored(with wells) 13mm.
500,000 Colored (with wells) 15mm.
200,000 415 Peach 13mm.

1000 gross 1 dram; 2000 gross 2 dram

We also buy odd lots of bottles and caps.

GLASS CONTAINER & CAP OUTLET CO.
876 Broadway, New York 3, N. Y.

SHEET METAL GOODS

SPRINKLER TOPS

CORK TOPS DOSE CAPS

CONSOLIDATED FRUIT JAR COMPANY
NEW BRUNSWICK, N. J.

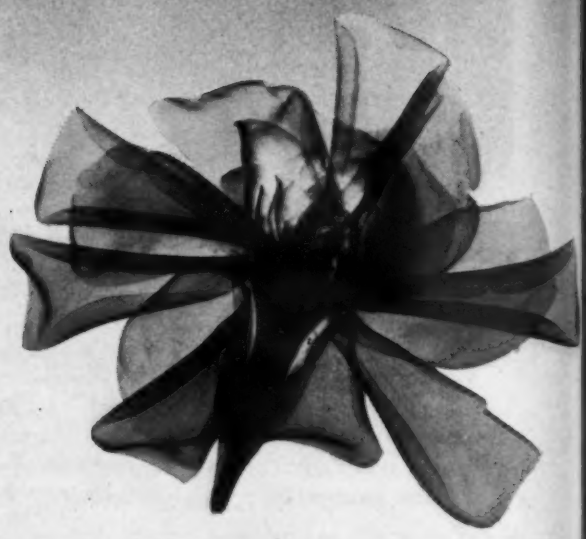
Simplicity of Line

Newly created—this classically beautiful perfume bottle, so simple that with it you can create an exclusive package distinctly your own. In ½ and 1 ounce sizes with accurately ground glass stopper. Limited production — write for details now.

1/3rd Century of Dependability

W. BRAUN CO.
[illegible] NORTH CANAL STREET [illegible] CHICAGO [illegible]

A new look at the Gardenia



Actual X-Ray of a Gardenia

As searching as this X-ray of the gardenia is the laboratory method of Dow technicians. Long experience and specialized skill are drawn upon to produce Synthetic Aromatics that give cosmetics and other products added distinction and quality.

SYNTHETIC

AROMATICS

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

NEWS

Roberts Heads N.W.D.A.

The seventieth annual meeting of the National Wholesale Druggists' Association was held at the Waldorf-Astoria, New York, September 26, 27 and 28. James W. Roberts of the Henry B. Gilpin Co., Norfolk, Va., is the new president. He succeeds Lace I. Fitschen, Alexander Drug Co., Oklahoma City.

JAMES W. ROBERTS

Other officers elected were: first vice-president, O. L. Rafuse, McKesson & Robbins, Inc., Buffalo; second vice-president, A. J. Sichelstiel, W. J. Gilmore Drug Co., Pittsburgh; third vice-president, A. S. Lester, McKesson & Robbins, Inc., Los Angeles; fourth vice-president, R. R. Ellis, Ellis-Bagwell Drug Co., Memphis; fifth vice-president, R. T. Thompson, McKesson & Robbins, Inc., Houston.

New members elected to the board were: J. D. Crump, McKesson & Robbins, Inc., Macon, Ga.; C. C. Caruso, Schieffelin & Co., New York; Edward S. Albers, Albers Drug Co., Knoxville; H. S. Price, Orr, Brown & Price Co., Columbus, Ohio.

Russell Advanced by Searle

William L. Russell, for the past three years a member of the sales department of G. D. Searle & Co., Chicago, has been made assistant to the director of advertising.

Sterling Buys Campho-Phenique

Sterling Drug Inc. has acquired the stock of James F. Ballard, Inc., St. Louis, manufacturer of Campho-Phenique and other drug products. The transaction was announced in St. Louis by James Hill, Jr., president of Sterling. It involved payment to Ballard's stockholders of 21,000 shares of Sterling stock, which Mr. Hill turned over to David White, president of the St. Louis company, as representative of the stockholders.

Ballard's 1943 earnings were $102,930, equivalent to $4.90 per share on the Sterling stock given in exchange for that of Ballard. Manufacturing will be continued in St. Louis and Mr. White will remain with the company. Ballard's sales staff will be merged with that of the Dr. W. B. Caldwell Co. Division of Sterling Drug Inc., whose headquarters are at Monticello, Ill.

Hamilton Named Gen. Manager

Abbott K. Hamilton has been elected vice-president and general manager of Pennsylvania Alcohol & Chemical Corp. and the Siboney Distilling Corp., wholly owned subsidiaries of the National Sugar Refining Co.

Emery Branch in Philadelphia

Emery Industries, Inc., Cincinnati, has announced the opening of a branch sales office and warehouse at 401 N. Broad St., Philadelphia 8. M. Jay Veenstra will represent the company as district chemical sales manager in Philadelphia. The telephone number of the new branch is LOMbard 5301.

J. O. Ross Opens in Boston

The J. O. Ross Engineering Corp. of New York has announced the opening of a new branch office at 79 Milk St., Boston 9. The Boston office will be in charge of Frank W. Partsch, vice-president.

Bobst Resigns from Hoffmann-La Roche

Elmer H. Bobst has resigned as president and general manager of Hoffmann-La Roche, Inc., Nutley, N. J. effective October 1. He had been associated with the company since October 1914. L. D. Barney, business manager of the Wisconsin Alumni Research Foundation at Madison, Wis., will succeed Mr. Bobst. It is expected that Mr. Barney will eventually be elected president of the company.

Treasury Department figures in July disclosed that Mr. Bobst was the highest salaried man in New Jersey in 1942 and tenth highest in the country, with a total remuneration of $308,175.

It is possible that Mr. Barney's resignation from the Wisconsin Alumni Research Foundation will not take effect until the foundation's suit under the Steenbock irradiation process patent

ELMER H. BOBST

relative to vitamin D has at least gone through the Federal court proceedings in Chicago, where they are scheduled to start in October.

Mr. Barney was born in Milwaukee in 1906. He is a graduate of the University of Wisconsin and became associated with the foundation in 1932 as an accountant, later becoming assistant to Harry L. Russell, its director. He was made business manager in July 1939.

Captain Sheffield—Assistant to Gen.

Captain Thomas C. Sheffield, formerly western manager of the New England Collapsible Tube Co., is now working as executive assistant to General H. H. Arnold, Commanding General Army Air Forces. Captain Sheffield recently accompanied Robert Lovett, Assistant Secretary of War for Air on an extensive inspection tour of air force installations in England and France. He has now returned to Washington and is located at Room 3E-1012, Pentagon Building.

ritzsche 25 Yr. Club Elects Two

Fritzsche Brothers' fast-growing Quarter of A Century Club held another of its celebrations at Charles' Restaurant, September 26, with a luncheon in honor of the two newest members—Emil Muller, assistant to the director of production, and John H. Haunss, head of the order department.

F. H. Leonhardt, president of Fritzsche Brothers, Inc., welcomed the new members and presented them with substantial government bonds as their gift from the firm. Gold wrist watches were presented to Mr. Muller and Mr. Haunss by the company employees.

Of the twenty-three who have reached the qualifying number of years of service, eighteen are still active in the company and have been for a total of 607 years.

Other members present at the luncheon were: Mary Neary; Mae Caufield; George Ringel, vice-president; R. R. Redanz, assistant treasurer; William Barnes, Thomas Coyle, Arthur Howlings, Edward and William Keller, James McNamara, Francis Riley, Charles Schneider, and Albert Wardman.

Amer. Cholesterol Moves in N. Y.

American Cholesterol Products has moved to 40 Exchange Place, New York 5.

Dunbar Succeeds Nevin

Guy S. Dunbar has been elected president of Burroughs Wellcome & Co. succeeding Thomas Nevin who has retired. Mr. Dunbar has also been elected general manager and a director. Mr. Nevin will remain as a director and has been elected vice-chairman of the board. Howard B. Fonda has been elected a member of the board of directors and R. C. Ralphs, treasurer, and W. F. Weber, secretary, have been elected vice-presidents.

Trombley Heads Monsanto in Seattle

Monsanto Chemical Co., St. Louis, has opened a sales office in Seattle under the direction of C. F. Trombley. He will represent the company in all lines except those of the recently acquired I. F. Laucks properties.

Mr. Trombley has been with Monsanto since 1936 and has represented the company in New England, St. Louis and New York. His new office will be at 911 Western Avenue, Seattle, headquarters of I. F. Laucks, Inc.

P. C. Magnus Reopens Hospital

When the Downtown Hospital of New York was re-opened after a suspension in its service for the purpose of making needed repairs and improvements, Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc., and president of the hospital, addressed a gathering in front of the hospital, at Broad and South Streets.

Seaforth Appointments

Alfred D. McKelvy, president of the Alfred D. McKelvy Co., New York, has announced several changes in the organization which have been necessitated by the tremendous growth of the company. H. C. Richardson has been appointed vice-president and general manager. Mr. Richardson assumes his new post after having served as sales manager of the McKelvy Co. since January, 1942. He joined the organization in 1940 as west coast representative.

Vincent I. Mora, who for several years has covered the major part of the country for the McKelvy Co., is now sales promotion manager.

Additions to the sales staff include Emory W. Christensen, who will cover the midwest and mountain territory; John C. Tims, the southeastern states, and John W. Law, Jr., who will cover New York and New England.

Navy Congratulates Sonneborn

In a stirring ceremony the employees of the Franklin Creek Refining Co., Franklin, Pa., a subsidiary of L. Sonneborn Sons, Inc., New York, were congratulated by the Navy for staying on the job and producing oil without interruption. Lt. (j.g.) E. R. Leighton of the Spars made a plea for continued top production to which the employees responded enthusiastically.

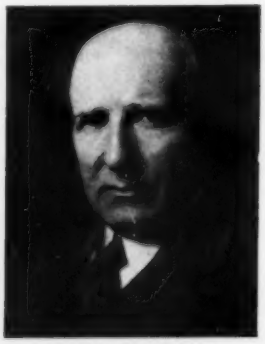
The meeting was opened with a brief memorial service for Sgt. Glenn A. Campbell, Turret Gunner in a B-26 Marauder Bomber, whose plane was shot down in a raid over Dilli, in Portuguese Timor. Before entering the service Sgt. Campbell was employed at the refinery.

Jonthay Moves in New York

The factory and offices of Jonthay were moved September 12 to the sixth floor of 166 Duane St., New York 13. The new telephone number is WAlker 5-5777.

Florasynth Annual Meeting

Florasynth Laboratories held its annual meeting September 14 and 15. A program to increase manufacturing facilities in the midwest and California was adopted and plans were made for the immediate undertaking of manufacturing on the west coast. In appreciation of the services rendered by David Lakritz, chief chemist, and by Leonard Katz in the development of the west coast business, two new vice-presidencies were created. The following officers were elected: Alexander E. Katz, president; William Lakritz, executive vice-president; David Lakritz and Leonard Katz, vice-presidents; Joseph F. Fein, treasurer, Charles P. Kramer, secretary; and Charlotte F. Senior, assistant secretary and assistant treasurer.



THOMAS NEVIN

GUY S. DUNBAR

HOWARD B. FONDA

Helps reduce absenteeism . . . fights infection as a germicide . . . helps promote health as a nutritional ingredient.

IODINE

protects health in many ways

Many people think of Iodine purely as a germicide. In the form of tincture, Iodine is still a primary requisite in factory first aid kits. Prompt attention to cuts, scratches and wounds—with this powerful and penetrating germicide—saves many an employee weeks on sick leave, cuts down absenteeism.

Few realize the importance of Iodine nutritionally. But Iodine in minute quantities is needed by both man and beast in the metabolism of food and for general good health.

Baker supplies various forms of Iodine to a great number of pharmaceutical companies for use in medical preparations and pharmaceutical products. Baker likewise supplies Iodine to salt manufacturers. Common table salt is also iodized and is recommended by physicians, especially in the goiter belt.

Manufacturers of stock feeds also use Iodized Salt or various Iodine mixtures—some straight Potassium Iodide USP, others one of the 90-10 mixtures, the 10% being Calcium Carbonate or Magnesium Carbonate or Calcium Stearate.

The latter Potassium Iodide mixture containing Calcium Stearate is known as Stabilized Iodine, for Calcium Stearate tends to stabilize the iodine against oxidation.

All these Iodine products primarily are for the protection of health. Whatever your requirements may be, when there is a need for Iodine in any form, remember Baker.

J. T. Baker Chemical Co., *Executives Offices and Plant:* Phillipsburg, New Jersey. *Branch Offices:* New York, Philadelphia and Chicago.

4

IODINE PRODUCTS MADE BY BAKER

IODINE USP RESUBLIMED

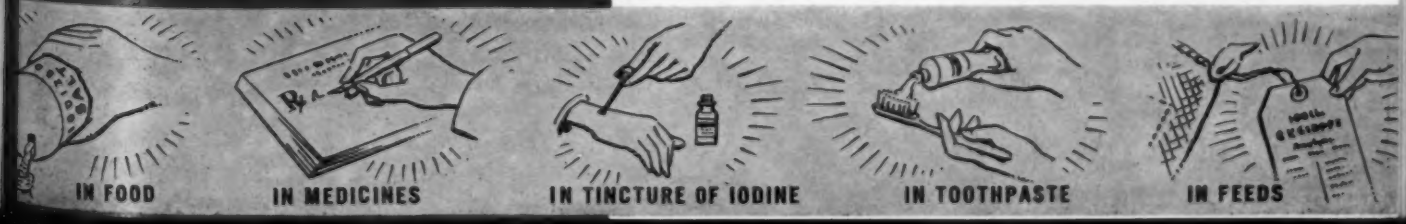
Potassium Iodide USP
CRYSTAL, GRANULAR, POWDER

Sodium Iodide USP
GRANULAR

Potassium Iodide Mixtures
10% CALCIUM CARBONATE
OR
10% MAGNESIUM CARBONATE
OR
10% CALCIUM STEARATE

Baker's Chemicals

C. P. ANALYZED · FINE · INDUSTRIAL



WOMEN PREFER

BUYING DRUGS IN CANS

FOR THESE

5 MAJOR REASONS!

Vital buying factors revealed by consumers in nation-wide home survey

1. **SAFETY** . . . Cans don't break, chip, split, leak or tear. Safe when handled with wet hands.
2. **HEALTH PROTECTION** . . . Cans are sanitary—keep out germs and dirt. Directions lithographed on can—no labels to drop off.
3. **QUALITY PROTECTION** . . . Preserve contents—waterproof.
4. **CONVENIENCE** . . . Easy to open, to use, to clean, to store. Not easily tipped over.
5. **ECONOMY** . . . Cans are less expensive.

● Yes, consumers find more sound reasons for preferring the can than any other container. And of course your profits depend on the likes of consumers! Right now they gladly put up with the inconveniences of wartime substitute packages. But they'll hail the day when cans are back and they can once more buy their favorite brands in the familiar steel-and-tin containers.

Big National Advertisements Increase Public Preference for Cans

Powerful advertisements in full color are now selling consumers the advantages of cans. Every month, about 30,000,000 printed messages are telling nearly every literate family why the can is an ideal container. Watch leading Sunday newspapers and the ten great national magazines listed here.

PUBLICATION	CIRCULATION
Ladies' Home Journal	4,136,747
McCall's	3,535,700
Saturday Evening Post	3,475,822
Good Housekeeping	2,690,373
American Magazine	2,556,469
Better Homes & Gardens	2,479,448
American Home	2,363,796
True Story	2,073,531
Look	1,919,130
Liberty	1,155,727

CAN MANUFACTURERS' INSTITUTE, INC., NEW YORK

NO OTHER CONTAINER PROTECTS LIKE THE CAN

Dr. Smith Heads J. & J. Labs.

Dr. David F. Smith has been appointed director of the laboratories of Johnson & Johnson, New Brunswick, N. J., replacing G. S. Mathey, vice-president, whose recent illness has necessitated his relinquishing direction of the company's activities in chemical and clinical research, product and

D. F. SMITH

process development and quality control. Mr. Mathey will continue as a vice-president of Johnson & Johnson and as president of the Johnson & Johnson Research Foundation.

Dr. Smith is a graduate of the California Institute of Technology and was the Institute's travel scholar at European universities. He was a fellow of the National Research Council and research associate at the University of California. He came to Johnson & Johnson after industrial experience as director of research and development.

Robert Harsell to Serve

Robert Harsell, vice-president and sales manager of Sterling Drug, Inc., New York, has accepted the chairmanship of the Drugs and Pharmaceuticals Division of the 1944 campaign for funds of the Visiting Nurse Service of New York.

National Drug Advances Wenrich

John P. Wenrich has been named eastern division manager of the National Drug Co., Philadelphia. Mr. Wenrich has been a representative of the company for the past nineteen years.

Hyams with Farel Destin

Herbert Hyams has been appointed retail sales manager of Farel Destin, Inc., New York. Mr. Hyams was formerly sales manager for Affiliated Products, Inc., and the House of Louis Philippe, for over seven years.

Captain Hugh Crosson Commended

Captain Hugh S. Crosson, son of Hugh Crosson, drug and proprietary buyer for McKesson & Robbins, New York, has received the commendation of his commanding officer for his activities and accomplishments in the Tanamerah Bay operation last April. Captain Crosson is with the 21st Infantry and had been in the army for the past three years.

Fitzgerald Made Vice President

Harry Gibbs, president of Gibbs & Co., Chicago, has announced the appointment of E. J. Fitzgerald as executive vice-president in charge of Bree Cosmetics, a division of the parent company. Mr. Fitzgerald has been with the organization for twenty-one years.

Martin Advanced by U. S. I.

U. S. Industrial Chemicals, Inc. has announced the appointment of Milton F. Martin as assistant general sales manager. Mr. Martin has been with the sales department of U.S.I. since 1935.

MILTON F. MARTIN

For the past six years, he has been assistant to L. A. Keane, vice-president in charge of sales. Prior to that time he was in the Philadelphia, Detroit and Cleveland territories.

P. C. Magnus Elected Director

At the semi-annual meeting of the members of the Philadelphia College of Pharmacy and Science, Percy C. Magnus, president of Magnus, Mabee and Reynard, Inc., New York, and L. Stanley King, pharmacist of Bala-Cynwyd, Pa., were elected trustees.

Three other trustees were reelected to serve for three years more. They are Arthur Littleton, William E. Ridenour, and Julius W. Sturmer. The board of trustees consists of twenty-four members.

Bowman Organizes Vitamin Company

Charles L. Bowman, Willis A. Diekema and Curtis Gray have organized a new company of pharmaceutical distributors specializing in service to the vitamin industry. The company, which will be known as Charles Bowman & Co., will maintain sales and executive offices at 220 East 42 St., New York 17,

CHARLES L. BOWMAN

and a business and accounting office at 130 Central Ave., Holland, Mich. There will also be a branch sales office in Chicago.

The new company recently purchased the vitamin D plant of General Foods, and is now installing manufacturing facilities and laboratories in Holland, Mich., and Los Angeles. Vitamin D products will be produced under license from Wisconsin Alumni Research Foundation and will be offered in various forms to the pharmaceutical, food and feed trades.

Mr. Bowman has been engaged in the manufacture of vitamins since 1928 when he formed the Vitab Products Co., manufacturer of natural vitamin B complex products in California. When the company was sold in 1937 he became vice-president of International Vitamin Corp. In 1940 he organized the pharmaceutical division of Standard Brands, Inc., and was manager of the division until his resignation September 1, 1944.

Mr. Bowman is at present a member of the OPA Vitamin Industry Advisory Committee and a member of the organization committee of the National Vitamin Foundation.

N. E. Tank Appoints Agent

The New England Tank & Tower Co. has announced the appointment of the Storms-Harvey Equipment Co., 123 Bleecker St., New York, as sales agent for "Nettco" agitator drives and mixing equipment in eastern New York, New Jersey and southern Connecticut.

More Manufacturers of

COLOGNES, TOILET WATERS, AFTER-SHAVE LOTIONS and TONICS are Adopting

ORBIS ALCOH-SOLS

This bottle contains 1 ounce perfume oil per gallon of 25% alcohol.
Same strength alcohol, same amount of perfume introduced through medium of ORBIS ALCOH-SOL. UNFILTERED.

UNRETOUCHED PHOTO

BECAUSE—Alcoh-sols are perfume oils that are especially compounded to render them soluble in low proof alcohol—20 to 30%.

BECAUSE — Use of low proof alcohol stretches your limited supply of this valuable strategic material.

BECAUSE — Alcoh-sols dissolve clearly and thereby save troublesome filtration. Important because time-saving.

BECAUSE — They work equally well in specially denatured or isopropyl alcohol. Excellent coverage is imparted to the latter.

A request will bring full information about these and other odors in our full line of Orbis Alcoh-sols. They are proving acceptable to others — they will to you.

Copy of latest catalog on request

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO
660 North Dearborn St.

PHILADELPHIA
610 Brown Bldg.

BOSTON
89 Broad Street

LOS ANGELES
1807 E. Olympic Blvd.

MEMPHIS, TENN.
1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

Crozier Again Heads F.W.D.A.

The Federal Wholesale Druggists' Association held its fourth "Road Ahead Conference" at the Waldorf-Astoria, New York, September 14, 15 and 16. All officers were re-elected as follows: president, John A. Crozier, Calvert Drug Co., Baltimore; vice-president, Oscar J. Schmitz, Snowden-Mize Drug Co., Atchinson, Kans.; treasurer, George A. Raab, Providence Wholesale Co., Providence, R. I., and executive secretary, R. C. Schlotterer.

Members of the executive committee are: chairman, Howard M. Bradbury, president of the Washington Wholesale Drug Exchange, Washington, D. C.; Stanley B. Arend, United Consumers, Inc., Boston; Glen T. Helgren, Ellicott Drug Co., Buffalo; Henry V. DeHaven, Philadelphia Wholesale Drug Co., Philadelphia; and Keith Keller, Northwestern Drug Co., Minneapolis.

Chicago Assn. Golf Outing

The Golf Auxiliary of the Chicago Perfumery, Soap and Extract Association, under the leadership of Martin Vance of Givaudan-Delawanna, Inc., held its final tournament of the season September 22 at Westward Ho Golf Club. Moving pictures of the golf tournaments for the past several years, including this year, were shown.

Chicago Assn. Luncheon.

The Chicago Drug & Chemical Association held its first fall luncheon meeting September 28 at the Drake Hotel. The speaker was Donald McGibney whose subject was, "What's Ahead in World Affairs."

Phila. Drug Exchange Outing

The Philadelphia Drug Exchange held its annual fall outing October 4 at the Lu Lu Country Club, North Hills, Pa. A golf tournament was followed by dinner and an evening of entertainment.

Spence Cited for Bravery

William J. Spence, of Roger & Gallet, has been cited for his courageous actions by the commanding general of the 1st Armoured Division of the Fifth Army front in Italy. At the time the citation was awarded he was a corporal in the Medical Corps and has since been promoted to the rank of sergeant. Sgt. Spence joined the Army in February 1941, and has since been in the major battles in Africa, Tunisia, and Sicily. He is now somewhere in Italy. Before entering the service he was junior salesman for Roger & Gallet. He is the son of William J. Spence, who is in charge of sales of the New York office of Roger & Gallet.

Almroth Leaves Owens

Thomas K. Almroth, general advertising manager of Owens-Illinois Glass Co., and associated with the company for nearly thirty years, has announced his resignation, effective October 15.

T. K. ALMROTH

Mr. Almroth said that his decision was based on the conviction that in the post-war period he could put his experience to broader use in another field. His plans will be announced later.

Mr. Almroth is a charter member and past president of the Toledo Industrial Marketers, a chapter of the National Industrial Advertising Association. He has represented Owens-Illinois for ten years in the Association of National Advertisers.

Peggy Sage Appoints Miss Cory

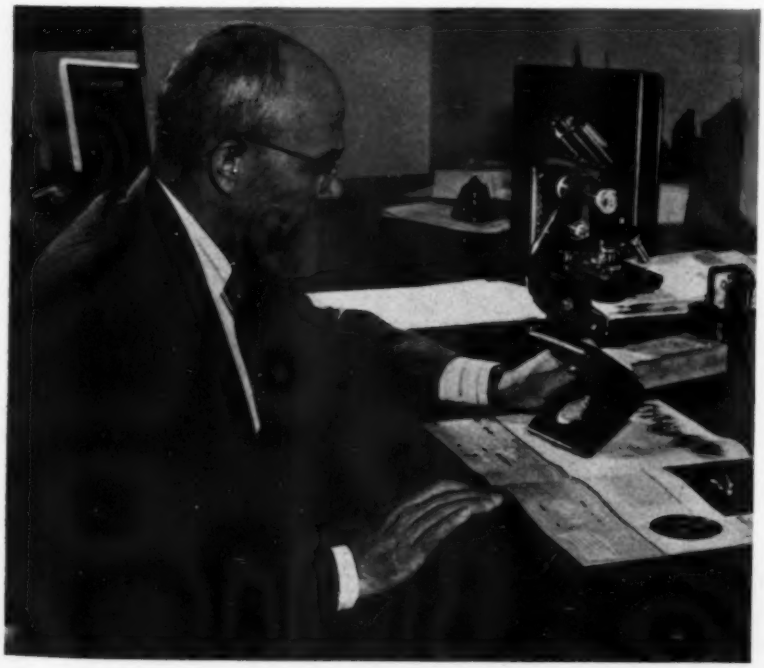
Peggy Sage has appointed Kathleen Spencer Cory as promotion manager. Miss Cory was formerly general manager of Paul Dreifuss Co., and previous to that was with R. H. Macy as associate manager of cosmetics and drugs, in charge of fashion co-ordination and new product development.

Ethiopian Agent

H. Galatis, import, export and commission agent in Addis Ababa, is interested in representing American manufacturers of pharmaceutical and medicinal products in Ethiopia, Erythrea and Djibouti. Mr. Galatis' address is P. O. Box 872, Addis Ababa, Ethiopia.

Chambers with Maupassant

Clarence H. Chambers is sponsoring the Maupassant line of perfumes called "Thou Shalt Not," located at 1153 East 28th St., Brooklyn 10, N. Y. Mr. Chambers was formerly with Bourjois for nearly twenty years, later with Alexandra de Markoff, and Henri Bendel for four years.



O. C. Durham, research botanist of Abbott Laboratories in his laboratory examining a watch presented to him by Dr. Hal M. Davison, Atlanta allergist, with whom he recently collaborated on a study of air-borne pollens and fungus spores at Atlanta and St. Simon Island, Ga.

J. & J. Names L'Hommedieu V. P.

Paige D. L'Hommedieu who has been with Johnson & Johnson, New Brunswick, N. J., since 1929, has been elected vice-president in charge of general line sales.

PAIGE L'HOMMEDIEU

Flynn Manages Packaging Office

Max Factor & Co., Hollywood, Calif., announces the opening of a New York packaging office at 730 Fifth Ave., New York 19, N. Y., under the management of Charles Francis Flynn. The new branch will function exclusively as a buying office and a central location where ideas for new products, containers, manufacturing devices, equipment, and inventions, pertaining to cosmetics, may be submitted. The office will have no connection with the sales or distribution of the company's products, which continue to be handled as before through Sales Builders, Inc.

Weedon Honored by Eno

Charles J. Weedon, president of J. C. Eno, Inc., Bloomfield, N. J., was guest of honor at a dinner at Hampshire House, New York, September 7. The occasion was the twenty-fifth anniversary of his association with the company.

After serving with the R. A. F. from 1914 to 1919, Mr. Weedon joined J. C. Eno, Ltd., London, manufacturer of Eno Fruit Salt since 1868. In 1926 he opened the Canadian branch in Toronto and in 1928 the company's first plant in the United States at Buffalo.

In 1941 Mr. Weedon moved his headquarters from Toronto to Bloomfield, N. J., and later was elected president and chairman of the board of J. C. Eno, Inc. This year he was elected president of Scott & Bowne and its subsidiary companies. In his capacity as North American director of Beecham Export Corp., Ltd., he has directed the destiny of Eno, Scott's Emulsion and other group products in the entire western hemisphere.

Crookes Labs. Bought Here

Crookes Laboratories, Inc., New York, has been purchased by American interests, it has been announced by Justin Haynes, the company's new president.

The Crookes company, manufacturer of ethical pharmaceuticals, since 1929, has been affiliated with British Colloids, Ltd., also known as the Crookes Laboratories of London, England, and Bombay, India. The company will continue under its present name and E. A. H. King, who has been with it for many years has been appointed executive vice-president.

Mr. Haynes is a director of Bristol-Myers Co., the Rubberset Co. and William Peterman, Inc.

Fox Heads Dow in Los Angeles

Hubert C. Fox has been made office manager of the Los Angeles office of Dow Chemical Co., Midland, Mich. Mr. Fox, who has been with Dow for the past twenty-one years, will also assist C. L. Pierce, sales representative in the Los Angeles area.

Maurella Appoints Lisbon

Philip Lisbon, industrial engineer, has been appointed plant superintendent of Maurella Products Co., New York. Mr. Lisbon, who joined Maurella earlier this year, was graduated from Amherst College in 1927 and has been working in the field of industrial management.

Betty Kusmiak has been promoted to the position of assistant to Dr. David G. Salten, chief chemist of the company. Miss Kusmiak attended the University of Miami and Stevens Institute. She came to Maurella from Dodge & Olcott.

Kinsman Advanced by Du Pont

J. Warren Kinsman, who has been assistant general manager of the organic chemical department of E. I. du Pont de Nemours & Co., has been made general manager of the company's fabrics and finishes department, succeeding William Richter who has retired. Mr. Kinsman was born in Elizabeth, N. J. and attended Wesleyan University and Columbia. He has been with du Pont since 1915.

Dr. William Kirk, who has been with du Pont since 1916, succeeds Mr. Kinsman as assistant general manager of the organic chemical department. Dr. Kirk has managed the Deepwater Point, N. J., plant of that department since 1941, and has been engaged in dyestuffs research and manufacture there since 1918.

Frank Miles Joins Parento

Frank J. M. Miles has joined Compagnie Parento Inc. as perfumer in charge of research and development. He was formerly associated with Melba and later with Houbigant and Cheramy as vice-president in charge of manufacturing. He went from there to Colgate and then established research laboratories in California as consultant to several perfume houses. Mr. Miles returned to the east several years ago and has been connected with an essential oil house.

Arlinco Research Expands

The Arlinco Research Laboratory, Inc., has greatly enlarged its research facilities at 333 West 52 St., New York.

C. J. Weedon, president, receiving a chest of silver from J. J. Carmichael, vice-president and treasurer of J. C. Eno (Canada) Ltd., Toronto. The silver was the gift of Eno employees in Bloomfield and Toronto.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1944

U.S.I. Announces Two New Phenolics

Unusual Properties Exhibited by New "Arochem" Resins

Of timely interest to formulators of varnishes and vehicles for protective coatings, and to ink manufacturers and other resin users, is U.S.I.'s introduction of two phenolic-type resins, especially developed for present-day use with soft oils. Both of these resins are currently available for many civilian end-uses, although application must still be made, as usual, under W.P.B. Order M-246.

S&W Arochem 337

S&W Arochem 337 is especially useful in quick-drying varnishes, quick-drying enamels for either general or industrial use, floor paints, spar varnishes, over-print varnishes and printing inks. This high melting point, modified-phenolic resin imparts faster bodying rate, faster drying properties, superior resistance to alkali and water, and greater film hardness and mar resistance than most modified phenolics in varnishes of equivalent oil lengths.

Ease of handling is another feature. Although it has an exceptionally high melting point, it is readily soluble, without special cooking procedures in most high viscosity oils. In nearly all cases, the total resin and oil content may be charged into the kettle at the start and taken to top heat without any "kick-out" or formation of gel particles. Due to the short cooking schedules required, varnishes made with S&W Arochem 337 are light in color.

While this resin is too reactive to be used with tung oil alone, satisfactory varnishes may be produced by the addition of moderate amounts of less reactive resin or oil to the cook.

S&W Arochem 338

S&W Arochem 338 is particularly well suited for use in gloss ink vehicles and over-print varnishes as well as varnishes and enamels for general and industrial use.

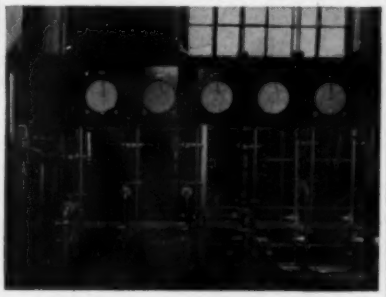
This resin, like S&W Arochem 337, is a modified phenolic, but it has a higher melting point, and being less soluble in solvents and oils, is more rapid in its bodying action. Developed primarily for use in printing inks and over-print varnishes, it produces ink vehicles of exceptionally high viscosity when cooked with linseed or other drying oils. This shortens the manufacturing holding times. Due to the unusually large molecular structure of the resin, the resulting vehicles dry to extremely

(*Continued on next page*)

Tonnage Production of Indalone Involves Novel Claisen Reaction

Manufacture of U.S.I.'s War Important Insectifuge Among First Large-scale Commercial Uses of this Type Condensation

Although every organic chemist has had laboratory experience with Claisen-type condensations, until recently only few have done much with these interesting reactions on a large commercial scale. The sudden demand for atebrin, sulfamerazine, vitamin B_1 and U.S.I.'s Indalone, as a result of the war, has focused wide attention on the tonnage production of such chemicals and has brought many developments of both present and postwar significance. First of these from the standpoint of tonnage is U.S.I.'s manufacture of Indalone, vital ingredient in the government's new all-purpose insect repellent.



Centralized control has played an important part in the successful tonnage-scale production of Indalone. Here you see one group of sensitive controllers, and recording instruments in U.S.I.'s Baltimore plant.

War Demands Met

Starting in the early 1920's with the first commercial production of acetoacetic ester, U.S.I. followed with the commercial-scale operation of a second Claisen reaction to produce sodium oxalacetate. This, in turn, was followed by the commercial introduction of Indalone in 1939. Tremendously stepped-up production of all of these products has been necessary to meet the huge war demands. This is particularly true of Indalone, production of which has been multiplied ten fold.

Basic Reaction

The reactions employed in the production of Indalone are shown on the next page. Mesityl oxide and dibutyl oxalate are first combined in a Claisen reaction using sodium butoxide as the condensing agent. This forms the sodium salt of Indalone which is then neutralized with dilute sulphuric acid. The process is carried out in the following stages.

Condensation Stage

Carefully measured quantities of mesityl oxide and dibutyl oxalate are added to the

(*Continued on next page*)

Finds New Short Cut to Zein Solutions

Current practice in preparing zein solutions calls for use of dry extracted zein to which is added a suitable solvent. Production of dry zein is a laborious and costly process involving the separate steps of precipitation, filtering, settling, washing and drying.

A newly patented process claims to greatly simplify the production of zein solutions and coating compounds by preparing them directly from the corn gluten. In the new method the granular or powdered gluten is first treated with a low boiling point zein protein solvent such as ethanol, or a mixture of such solvents.

Next the extract solution is separated from the residual gluten by filtration or centrifuging, and is then mixed with a base solvent of relatively high boiling point, such as ethylene glycol. Distillation removes the low boiling extracting solvent, leaving behind the zein dissolved in the base solvent and ready for use.

New Hydroscopic Ink For Recording Meters

One problem presented by recording meters of various kinds has been to find an ink which in the recorder pen will be able to withstand considerable exposure to the atmosphere without thickening or clogging, regardless of outside temperature or humidity, yet be fast drying after application.

A recent patent calls for a combination of a brilliant red dye with a tartrazine yellow for luminosity in a medium composed of water, ethanol, glycol and acetic acid. The hydroscopic effect of the glycol tends to absorb moisture from the air, thereby preventing the ink in the recorder pen from drying out. However, once the line is traced on the paper chart, the glycols are readily absorbed by the paper, thus producing a fast-drying ink. The acetic acid is added as a preservative.

RESIN SPECIFICATIONS

	S&W AROCHEM 337	S&W AROCHEM 338
Acid Number:	30-40	25-35
Melting Point: (Mercury)	150-160° C.	160-170° C.
Color:	N-K	N-K
Specific Gravity:	1.1	1.1
Soluble in:	Coal-tar and petroleum hydrocarbons and the usual solvents; in oils, both high and low viscosity.	Coal-tar hydrocarbons and lacquer solvents; medium and low viscosity oils.

NOTE: S&W Arochem 337 is insoluble in ethyl alcohol. S&W 338 is insoluble in petroleum hydrocarbons, although solutions will tolerate a high proportion of these solvents; it is completely insoluble in ethyl alcohol.

ADVERTISEMENT—*This entire page is a paid advertisement.*

October ★ **U.S.I. CHEMICAL NEWS** ★ 1944

Novel Use of Solvents Improves Moulded Plastics

Color, transparency, and strength of certain transparent moulded plastics, formerly was impaired by small quantities of unreacted olefin and catalyst residue remaining after the reaction was completed. These impurities caused opacity after moulding and adversely affected the mechanical strength of the moulded article.

According to the claims appearing in a recent patent on olefin-sulphur-dioxide resins, a new process entirely eliminates these detrimental features. Crude olefin-sulphur-dioxide resin, in finely divided form, is treated with a blast of air or inert gas carrying vapors of a resin solvent such as acetone. The solvent penetrates the fine resin particles, and softens them.

Best moulding results are obtained when minute traces of the vaporized solvent are allowed to remain in the resin until it is moulded. According to the inventor, articles moulded from the new resin possess greater transparency and strength, and due to absence of unreacted ingredients, do not undergo a secondary reaction which changes their color after moulding.

Two New Phenolics

(*Continued from preceding page*)

hard, tough films with maximum "hold-out" and gloss.

In the production of varnishes and enamels, S&W Arochem 338 usually requires special cooking when used with most pre-bodied oils, and is too rapid in its bodying action for use with oils like tung, without modification. Thus Arochem 337 is generally preferred for these products.

U.S.I. will be glad to send samples and further data on both resins to anyone interested.

Tonnage Production of Indalone Involves Novel Claisen Reaction

(*Continued from preceding page*)

reaction vessel together with sufficient benzene to assure complete solution of the sodium salt of Indalone at the end of the reaction. After thorough mixing, a carefully measured quantity of sodium butoxide (in butyl alcohol solution) is added. The reaction vessel is equipped with heat exchangers for removal of heat generated by the reaction.

Neutralization

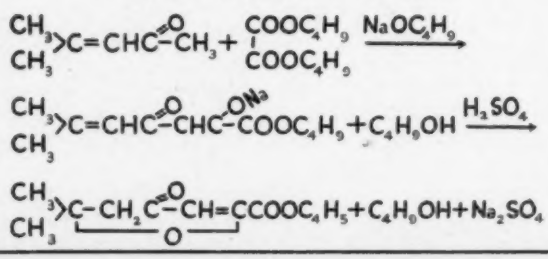
After the reaction has been completed (12-24 hours) the alkaline crude is neutralized with diluted sulphuric acid. This operation is critical and in the past has always been done on a batch basis. However, it is now being done with complete success using a continuous method developed at U.S.I.'s Baltimore plant.

Distillation and Recovery

The neutralized crude obtained from the above step is stripped of volatile solvents — benzene, butanol, and water — by a series of continuous vacuum distillation columns. The benzol and butanol are subsequently refined and returned to succeeding condensations. The stripped crude contains Indalone and a small amount of tars. The Indalone is recovered from the stripped crude by a continuous flash-distillation process, operating at 2 to 4mm. Hg, absolute pressure.

Approximately 90% of the Indalone is recovered in the flash-distillation process. The remaining 10% is present in the tar residue withdrawn continuously from the process. The Indalone present in these tars is subsequently recovered by a batch, low-pressure distillation process.

SYNTHESIS OF INDALONE



TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A water-resistant resin adhesive has been developed for use in mounting and over-coating paper and for other industrial applications where moisture resistance is needed. It is claimed that this new, clear adhesive will withstand a 48 hour immersion test, and that its long wet-life prevents paper wrinkling, makes registration easy. (No. 859)

U S I

Flame-proofed felt for vibration damping and insulation in high-temperature areas has been announced. It is claimed that this chemically treated felt can be exposed to the direct flame of a bunsen burner without either combustion or after glow. (No. 860)

U S I

A new rust-removing compound is claimed to facilitate pre-painting preparation of metal surfaces. The crystals of the preparation are said to become part of the metal and to be paint absorbent. (No. 861)

U S I

A tackifier for synthetic rubber, which is said to have added use as an extender, has been announced. The new product is claimed to be soluble in aromatic hydrocarbons, vegetable and mineral oils, and synthetic rubber. Some tack remains after vulcanizing. (No. 862)

U S I

Rubber heel marks and dirt may be removed from wood, cement and linoleum floors by a new cleaner, according to its manufacturer. (No. 863)

U S I

New flux for brazing preparation of cast iron, has been developed. It is said to produce a uniformly successful tinning prior to brazing. (No. 864)

U S I

A non-slip liquid wax, which, according to the manufacturer, requires no buffing and which may be applied with cloth, mop or spray equipment, has just been put on the market. (No. 865)

U S I

Two new protective creams have been designed to protect worker's hands. One is water soluble for dry work; the other is for protection where water and mild chemical solutions are present. (No. 866)

U S I

New dye for vinylite plastics, designed for dip application is available in yellow, orange, rose and green. A dip of 5 seconds is claimed to give a pastel shade, while a 60 second dip gives deep tones. (No. 867)

U S I

A new plastic resin adhesive, said to be colorless, of low viscosity and water-soluble, has been placed on the market. It is intended to be used with a co-agent in laminating and sizing textile fabrics and paper. (No. 868)

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. — BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Solox Proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Dioctyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diafol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40

ACETONE
Chemically Pure

RESINS
S&W Ester Gums—all types
S&W Congo Gums—raw, fused & esterified
S&W *Aroplaz—alkyds and allied materials
S&W *Arofene—pure phenolics
S&W *Arochem—modified types
S&W Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene Glycol
Nitrocellulose Solutions
Ethylene
*Indalone
Urethan

Trumbull Promoted

Howard A. Trumbull, merchandise manager of Owens-Illinois Glass Co., Toledo, has been appointed head of the sales promotion division of the company. This is a newly created division which combines the functions of merchandising, advertising and publicity. Mr. Trumbull has been with Owens-Illinois for eleven years and has been merchandise manager since 1937.

Winthrop Fined

The Winthrop Chemical Co., New York and Rensselaer, was fined $18,000 in United States District Court, October 4, after pleading guilty to a charge of negligently allowing contaminated drugs to be shipped to hospitals and the Army and Navy bases in the United States in violation of the Food, Drugs and Cosmetic Act.

The case involved the shipping in interstate commerce of adulterated distilled water, dextrose solution, phenarsine hydrochloride and neoarsphenamine neosalvarsan. The government contended that the drugs were contaminated with molds or pyrogens owing to "faulty methods of preparation and laxity of control." The tainted products were turned out in the summer of 1943 and most were recalled and taken out of circulation.

In suggesting what he termed "a relatively lenient" fine, United States Attorney James B. M. McNally pointed out that since the company has been engaged in war work on a twenty-four-hour a day schedule the violations were probably brought about by the pressure of the work. Also, the charges did not specify that the company's products had had any adverse effects on any patients.

Ross Young—Lt. Colonel

Ross D. Young, formerly import manager of McKesson & Robbins, Inc., located at Miami, Florida, has been promoted to lieutenant colonel, according to an announcement from headquarters of the Ninth Air Force in France. Colonel Young is commanding officer of a service group which is charged with supply, repair and maintenance of Marauder medium bombers.

New Drug Wholesaler

A new wholesale drug company to be known as Stanfield-Godbey has been formed by two former employees of McKesson & Robbins who have resigned their positions to form the new company. It will be located in Chattanooga.

Packaging Institute Meeting

Joel Y. Lund, vice-president of Lambert Pharmacal Co., St. Louis, and president of the Packaging Institute, has announced that the annual meeting of the institute will be held in New York, November 1 and 2, at the Hotel New Yorker. The sessions will be technical in nature.

S. Dewitt Clough, president of Abbott Laboratories, Rear Admiral George F. Hussey and Rear Admiral Luther Sheldon, Jr., at the opening of the first public exhibition of the Abbott Collection of Naval Medical Paintings at the National Gallery of Art, Washington.

Lavender Advanced by Grove

E. L. Lavender, former territory representative in the southwest, has been promoted to the position of assistant to

E. L. LAVENDER

V. R. Burtch, sales manager of the Vitamin Division of Grove Laboratories.

Lane with Standard Synthetics

James Lane, formerly with Burroughs Wellcome Co., has joined Standard Synthetics, Inc., New York. He will

JAMES LANE

serve in an executive capacity, assisting the president, Edward Remus, and J. L. Hindle, technical director.

George A. Hyde

George Alvan Hyde, director, secretary-treasurer, and a son of the founder of the Mentholatum Co., Wilmington, Del., died September 25 in the Delaware Hospital, following a heart attack. He was fifty-two years old.

Mr. Hyde was a native of Wichita, Kans., and had made his home in Newark, since 1937 when the Mentholatum Co. moved to Wilmington. He was a graduate of Williams College and had been associated with the company since his discharge from the army in 1918.

FOUR SYNTHETIC FLAVORING MATERIALS

to put "good luck" into your postwar planning

Monsanto flavors, made under exacting manufacturing methods and strict laboratory control, have the same high quality that won enthusiastic approval of so many concerns in your industry before the war. Because of *quality control* Monsanto synthetic flavors will put "good luck" in your postwar planning. These products always have the same high flavoring strength, making it easier for you to obtain uniform results in your production.

COUMARIN MONSANTO—A flavor and odor principle used separately or with vanillin.

ETHAVAN (Ethyl Vanillin)—Highly aromatic synthetic flavoring similar to vanillin but not identical with it. Relative flavoring strength approximately three times that of vanillin.

METHYL SALICYLATE, (U.S.P.)—Synthetic oil of wintergreen for flavoring foodstuffs and beverages.

VANILLIN MONSANTO, (U.S.P.)—Synthetic vanilla flavoring for foodstuffs and beverages.

Unless you are a regular Monsanto customer, we may not be able to supply you commercial quantities of Monsanto flavorings under restricted wartime production. However, we will be glad to send you information or samples to help you in creating your postwar products. Inquire of: MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal, Toronto.

MONSANTO CHEMICALS

SERVING INDUSTRY...WHICH SERVES MANKIND

George L. Ringel

George L. Ringel, vice-president and director of Fritzsche Brothers, Inc., New York, died October 3 at the Mount Carmel Hospital, Columbus, Ohio, where he was being treated for a heart ailment. He was sixty-six years old.

Mr. Ringel was born in Cincinnati and at the time of his death had been with the Fritzsche organization for

GEORGE L. RINGEL

nearly forty-four years, having joined the firm in February, 1901, shortly after completion of his studies at the Cincinnati College of Pharmacy.

Mr. Ringel had served the company as representative covering Ohio and adjacent territories and later as manager of eastern sales which brought him in contact with customers throughout the entire eastern seaboard, and in Canada as manager of Fritzsche Brothers of Canada, Ltd.

P. E. Herman

P. E. Herman, retired salesman of the Monsanto Chemical Company's organic division, died September 23 at his home in Cincinnati, following a long illness. He was seventy-five years old.

Mr. Herman was a graduate pharmacist and entered Monsanto's service in 1925, after a long drug and chemical background. For eleven years he covered a southern and mid-western sales territory. He went on a part-time schedule in 1936, limiting his sales territory to the Cincinnati area.

Edgar C. Lewis

Edgar C. (Blondy) Lewis, district sales manager for the Mallinckrodt Chemical Works, died at his home in Rochester, N. Y., September 20 of a heart attack. He was sixty-four years old.

Mr. Lewis was first associated with Walker-Gibson, wholesale drug house, and later was a traveling representative for Whitall-Tatum Co. He joined the New York staff of Mallinckrodt in 1910 and called on the trade in the metropolitan area until 1933 when he was made district sales manager in the western New York and Pennsylvania territory with headquarters in Rochester

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Nathan S. Beekley

Nathan S. Beekley, manager of the graphic arts division of Merck & Co., Inc., Rahway, N. J., died suddenly September 26 at his home in Westfield, N. J.

Mr. Beekley entered the employ of the Powers-Weightman-Rosengarten Co. of Philadelphia in November 1907 and moved into the position of manager of the graphic arts division following the merger of that company with Merck & Co., Inc.

Dwight L. Armstrong

Dwight L. Armstrong, vice-president of the Armstrong Cork Co., Lancaster, Pa., died September 10 after an illness of four weeks. He was fifty-four years old.

DWIGHT L. ARMSTRONG

Mr. Armstrong was the son of Charles D. Armstrong, former president of the company and grandson of Thomas M. Armstrong, its founder. He attended the Sterrett School in Pittsburgh and the Hill School in Pottstown, Pa., and was graduated from Yale University in 1917. He was an ensign in the Navy during the first world war and joined Armstrong Cork Co. in February 1919 in the Pittsburgh factory. He held various positions with the company and in 1928 was made general sales manager. In 1930 he was named vice-president in charge of sales; in 1933 he was made vice-president and general manager of the closure division. In 1939 he was attached to the president's office as a general executive vice-president. He had been a member of the board since 1931.

Dr. W. S. Landis

Dr. Walter S. Landis, vice-president and director of American Cyanamid Co., New York, died of a heart attack at his home in Old Greenwich, Conn., September 15. He was sixty-five years of age.

He was born in Pottstown, Pa., and was graduated from Lehigh University in 1902 as a metallurgical engineer. He obtained his M. S. from the same uni-

DR. WALTER SAVAGE LANDIS

versity in 1906 and received his Sc.D. in 1922. He served on the Lehigh faculty until 1912 when he resigned to become chief technologist for the American Cyanamid Co. Dr. Landis had been honored often for his contributions to chemical and metallurgical progress. He was awarded the Chemical Industry Medal in 1936; the Perkin Medal in 1939 and the American Institute of Chemists Medal in 1943. He held many patents both here and abroad.

William J. Trevillian

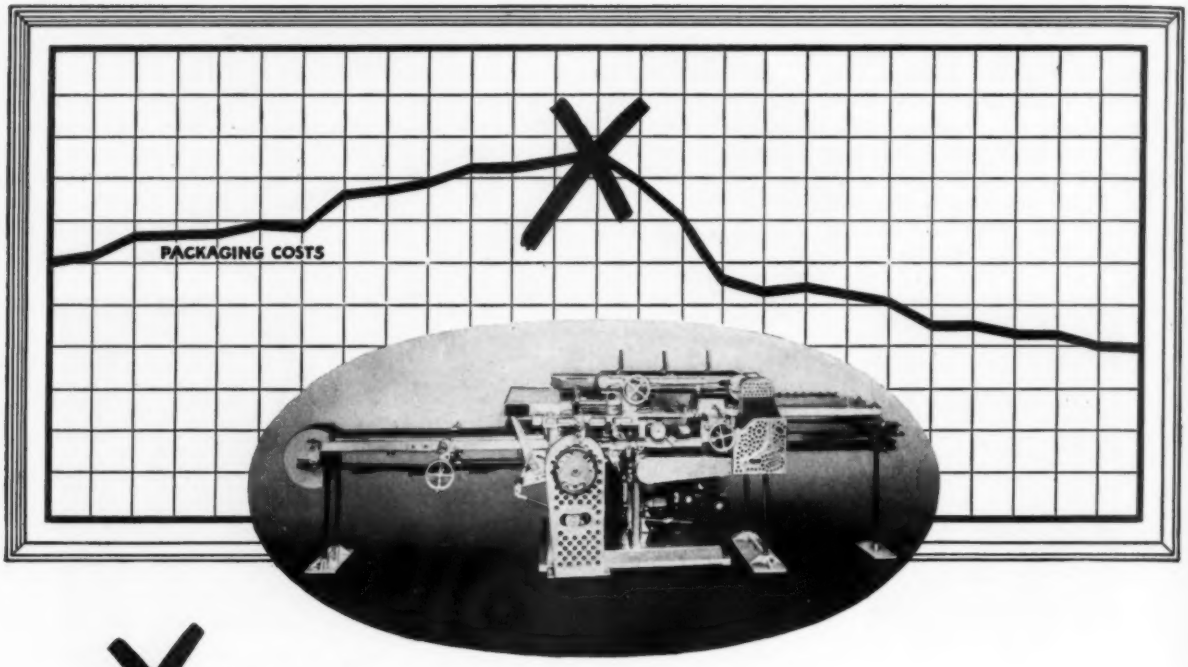
William J. Trevillian, for many years executive vice-president of the W. T. Rawleigh Co., Freeport, Ill., has died at the age of sixty-one.

Philip A. Ward

Philip A. Ward, treasurer of Hall & Ruckel, Inc., New York, died at King's County Hospital, Brooklyn, September 27, following a long illness. He was forty-nine years old and had been associated with Hall & Ruckel for the past seventeen years.

He was born in Brooklyn and served with the A. E. F. in France during World War I. He was wounded in action and was the recipient of the Purple Heart and the Oak Leaf Cluster. He was the first resident of Brooklyn to receive the Purple Heart.

He is survived by his wife and two sons, Charles H., U.S.N.R., Washington, D. C., and Philip C., serving with the army in France.



X marks the date *when this* *COST-REDUCER went into action*

Many an executive can point directly to the day when his company's costs took a nose-dive. For our machines invariably make a saving right from the day they are installed. In many cases they pay for themselves in one year's time. From then on the saving is clear profit.

This is a fact that calls for action now, so that you will be ready when postwar conditions *demand* lower costs.

Improved wrapping machines offer (1) faster production (2) saving of floor space (3) extreme adjustability – one machine often takes the place of several fixed-type machines (4) saving in wrapping material (5) lower selling costs through the heightened sales-appeal of an improved package.

Why not let us show you what a more efficient packaging set-up would do for you? Many concerns have already placed orders with us for postwar machinery replacements as a result of such foresighted planning.

Write for our new book "Sales Winning Packages and the machines that produce them".

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30 Church St., New York 7 • 111 W. Washington St., Chicago 2 • 101 W. Prospect Ave., Cleveland 15
443 S. San Pedro St., Los Angeles 13 • 32 Front St., W., Toronto 1

PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

Production Forum

By Francis Chilson

Industrial Consultant

Factories in Caves

For a long time I have wondered why drug manufacturers who require air conditioning in their processes do not consider locating in areas where natural caves exist in which the low air temperature seldom varies. Recently I visited the caves in Cobleskill, New York, and was told that the 50 degree temperature of the cave had never been known to vary more than one degree plus or minus at any season in the year. Come to think of it, the government could have saved a lot of money, building aircraft plants and other war plants by simply utilizing the huge caves like Carlsbad Caverns in New Mexico, Mammouth Cave in Kentucky and others. In addition to the protection inherent being underground, the caves would have a uniform temperature so necessary in handling precision parts. It is interesting to note that the government has at last got wise to the fact that caverns can be made to serve a useful purpose. A limestone mine in Atchinson, Kansas, has been converted into the world's largest refrigerator. It will contain 12 million cubic feet of storage space. The government in this instance, however, is installing a million and a half dollars worth of refrigerating equipment in order to make the mine usable for cold storage. Undoubtedly, there are caverns in which the temperature is low enough. For instance, near Pittsburgh, there are some natural ice mines or caves in which the ice never melts. It's a funny thing that the chemical companies who always try to locate sites near plenty of cool water have never got on to the idea of using the natural low temperature caves.

High Lift Truck

Lyon-Raymond Corporation, Greene, New York, certainly is a progressive outfit and has made a marked impression in the materials handling field. A comparative newcomer in this industry, it has made very rapid strides in the past ten years and has introduced many innovations. One of the most recent is a high lift truck which can be operated by one man. This lift truck is particularly useful in formula rooms where barrels and heavy drums are stacked on shelving at least two feet high. One man can shove this light weight unit under a skid and move it wherever he wishes and elevate a thousand pound load to a maximum of four feet high in a few seconds. For years I've been looking for a hand operated lift truck which would do exactly this. Apparently, this is it.

Dust Collecting

Dust Filter Company, 4422 North Clark St., Chicago, 40, has the slickest little streamlined unit dust collector that I've seen up to this point. The job is made in capacities ranging from 240 to 1000 cfm. I have tested one of these units and they are very efficient as well as compact and good looking.

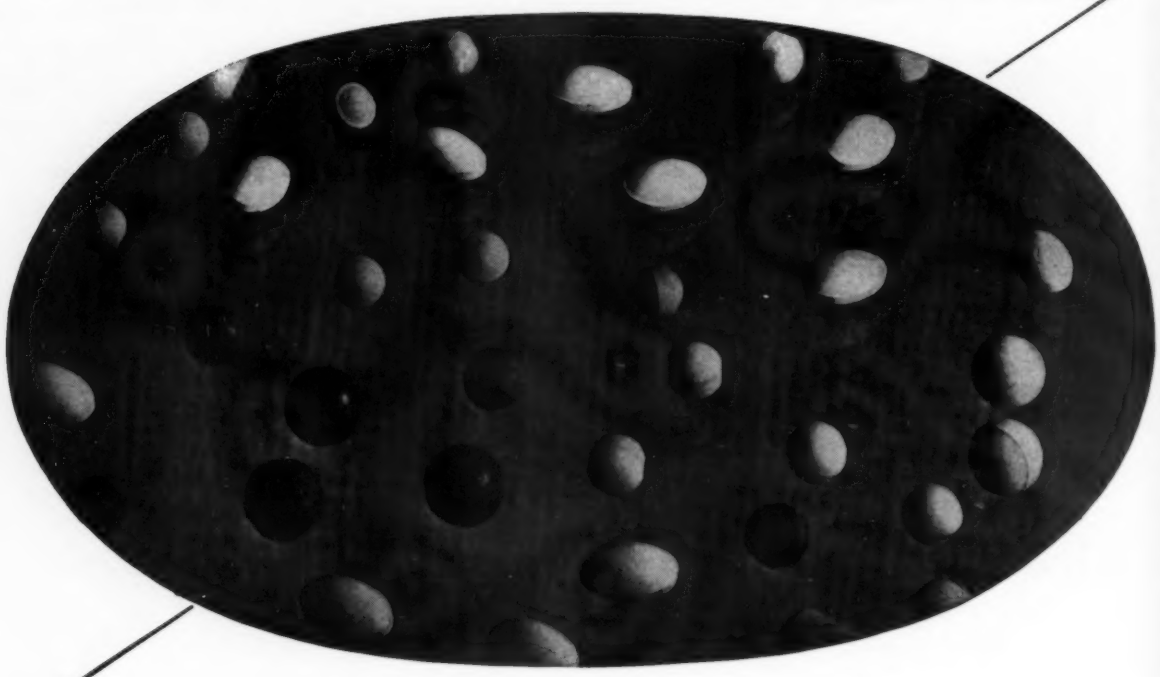
Portable Belt Conveyors

Island Equipment Corporation, 101 Park Avenue, New York, 17, are offering a series of caster mounted belt conveyor sections in three, five or ten foot lengths. Each section is driven by its own motor and is designed to couple together to make a continuous straight or zig-zag run of conveyor. The same units are available in slat or live rollers. The live rollers would be useful in shipping rooms for conveying packed cases to the scales.

Workers Beer

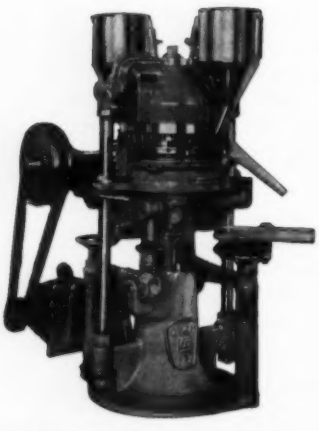
I have often wondered why company cafeterias do not include bottled beer for their workmen especially during hot weather. Serving beer in company cafeterias might sound radical to some, but for years construction and foundry workers, bakery workers and others employed in hard work or enervating atmospheres have always drunk beer at lunch as a matter of course. No ill effects have ever been noticed in such a practice. Beer is a mildly stimulating drink and it's nutritious. One time when I was doing a job for a concern in the middle west, a hot spell occurred which was one of the worst I have ever experienced. On my own initiative, I ordered two or three cases of beer for the men. They were delighted beyond words. The management was horrified but I stuck to my guns and said I'd pay for the beer myself because there was no question but that it would help the job along. Finally the management admitted I was right and decided to pay for

Compress Your VITAMINS



IN YOUR OWN PLANT

on High Speed Stokes Rotary Presses



Model BB-2 Machines are turning out vast quantities of atabrine, sulfa tablets and other war products for the Allied Forces.

Vitamins may be compressed in pearl, oval, capsule or conventional tablet shape on Stokes Rotaries furnished for this purpose. Special models are available, or certain present machines may be converted.

All the healthful properties of the vitamins are retained when properly compressed, and are readily assimilated. Vitamin tablets are less susceptible to humidity and may be safely shipped to any part of the globe.

Capsule, as well as other shaped tablets, can be made at small expense on Stokes Model BB-2 High Speed Rotary Tablet Machines. This equipment makes possible production when you want it . . . as much as you need . . . and at nominal cost.

Our laboratory facilities are available to assist in the preparation of materials and any necessary balancing of formulas for compressing.

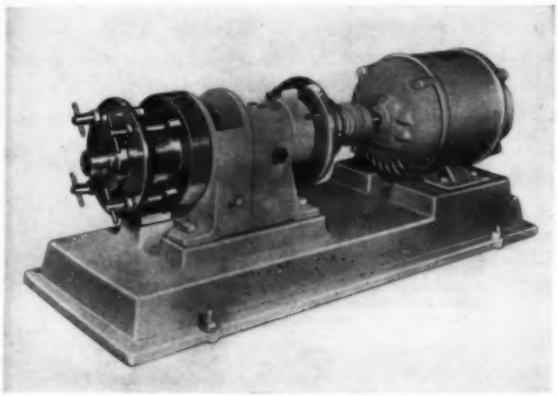
F. J. STOKES MACHINE COMPANY
5932 Tabor Road Olney P. O. Philadelphia 20, Pa.

F.J.Stokes TABLET MACHINES PHARMACEUTICAL EQUIPMENT FJS Est. 1895

the beer, which I had to report as "food" on the ground that if one of the antique directors discovered a beer item on the expense account, there'd be hell to pay. I like a glass of beer myself when the weather is hot. "What's sauce for the goose is sauce for the gander." When Mr. Big himself goes out to lunch he usually laps up a dish or two of cocktails without impairing his personal efficiency. So I don't think a bottle of beer at lunch for Mr. Little whose nose is on the hot grindstone all day would do him anything but good. I do not think it can be regarded as a habit forming alcoholic beverage.

Charlotte Mill

Chemicolloid Labs., Inc., 44 Whitehall St., New York would like me to call to your attention the fact that they have just developed a new colloid mill especially for the drug and cosmetic industry. Capacity



ranges up to fifty gallons per hour depending upon material being processed. Made of stainless steel throughout, the unit is designed for ease of dismantling and cleaning. Can be used for all types of fluids, suspensions, creams and ointments.

Mattoon's Ghost

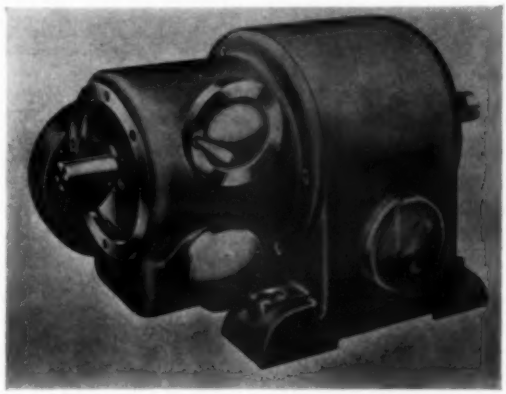
Mr. Turner Currens wishes to deny that he was the ghost who recently flitted around Mattoon, Illinois, spraying random shots of paralyzing gas through bedroom windows at sleeping women. Mr. Currens admits that he hails from Mattoon. He also concedes that time was when he did a bit of nocturnal flitting about Mattoon. He even confesses to a certain academic interest in bedrooms. He freely admits that on at least one occasion he was compelled to "flit" very rapidly down the back stairs when a certain irate gentleman of Mattoon hit the china closet with an axe after first having demolished the piano with the same instrument. In attesting his innocence in this particular occasion, Mr. Currens simply points out that it is impossible for a 300-pound man who walks on parenthetical legs to do any flitting, however provocative the occasion might be or however effervescent he might feel at any particular moment. Turner states that the last time he sprayed any paralyzing gas in Mattoon, it had no appreciable effect on the lady or ladies who were with him at the time although it could have been said that it backfired and paralyzed him. Having known Mr. Currens for many years, I am ready to believe that he is free of guilt from this first instance. In fact, I will offer the opinion that if he looked through a bedroom window at a sleeping woman he certainly wouldn't flit. I'll be damned if I know what he'd do—*or could do.*

New Variable Speed Drive

With the geared method of power transmission heretofore limited, because of bulkiness, to the small horsepower capacities, the new Lombard Variable Speed Drive, based on entirely new engineering principles, has come at an opportune moment for the planning of postwar equipment and machinery installation already replacing belt and chain drive methods. This new streamlined transmission is adding beauty, silence, split-hair control to the larger horsepower fields. Accompanying illustrations show the modern streamline design and graphically present the advantages of this long-waited improvement in the field of transmission of power.

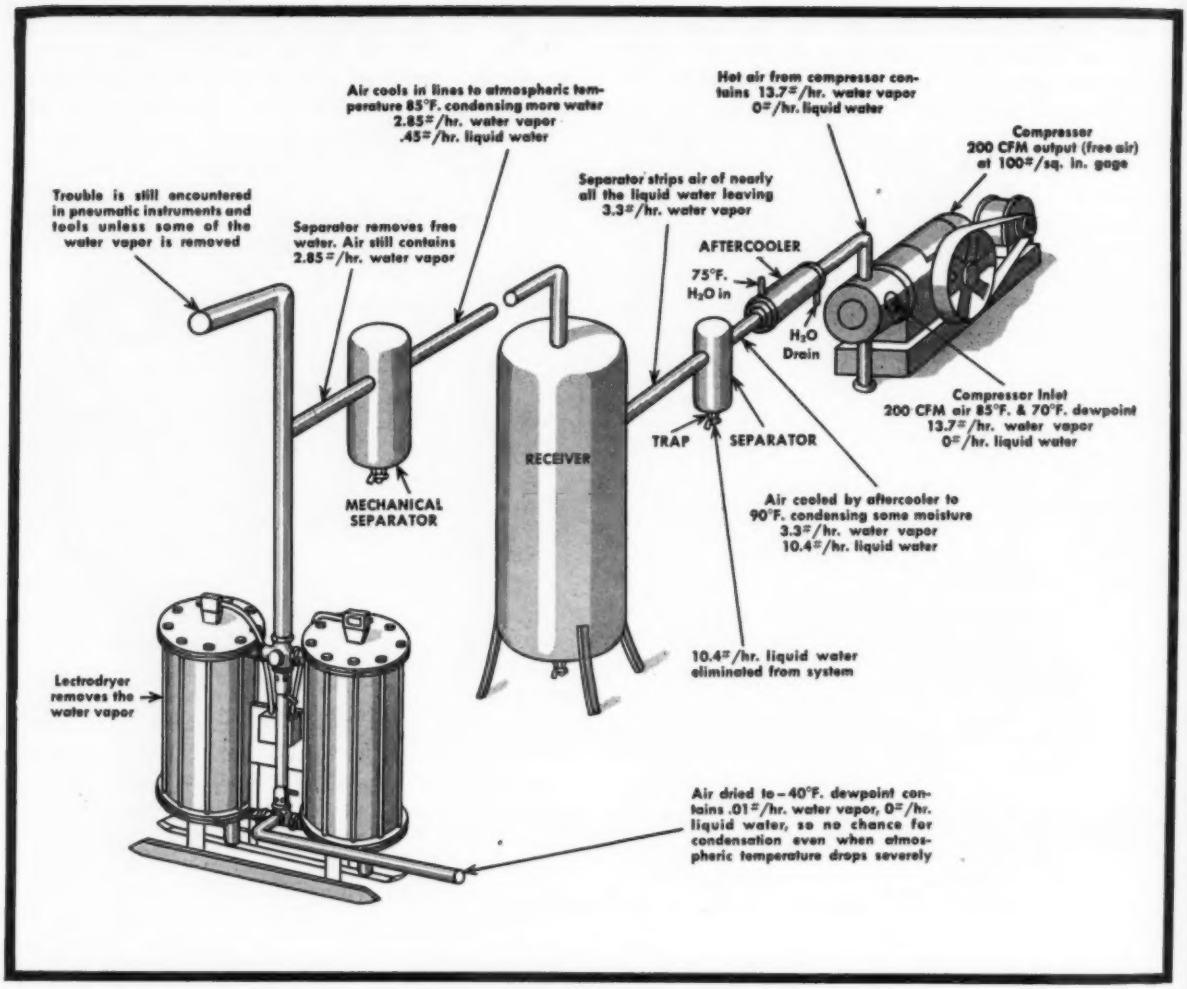
Already proved on heavy conveyors, high-speed blower, refrigerator, and pump equipment, the new type of drive developed by the Lombard Governor Corporation of Ashland, Mass., promises to be a large factor in the revitalizing of old equipment.

Its compactness particularly recommends it—for it is scarcely larger than the motor with which it is used—even in the higher horsepowers, 15, 25, 50, and 100 HP or higher. The complete unit with the motor has the size and appearance of two standard AC motors coupled together—a saving of space which is a considerable factor. Weighing not much more than the



motor which drives it, the Lombard Variable Speed Drive assures ease of handling and installation. Long life is assured as the gears are totally enclosed and run in oil. This factor also reduces noise, makes for safety and eliminates the possibility of dirt, grit, and moisture getting into the gears, while at the same time practically eliminating maintenance cost.

Differing from conventional types of variable speed


Air cools in lines to atmospheric temperature 85°F. condensing more water
2.85#/hr. water vapor
.45#/hr. liquid water
Hot air from compressor contains 13.7#/hr. water vapor
0#/hr. liquid water
Compressor
200 CFM output (free air)
at 100#/sq. in. gage
Trouble is still encountered in pneumatic instruments and tools unless some of the water vapor is removed
Separator removes free water. Air still contains 2.85#/hr. water vapor
Separator strips air of nearly all the liquid water leaving 3.3#/hr. water vapor
AFTERCOOLER
75°F. H2O in
H2O Drain
Compressor Inlet
200 CFM air 85°F. & 70°F. dewpoint
13.7#/hr. water vapor
0#/hr. liquid water
RECEIVER
TRAP
SEPARATOR
MECHANICAL SEPARATOR
Air cooled by aftercooler to 90°F. condensing some moisture
3.3#/hr. water vapor
10.4#/hr. liquid water
10.4#/hr. liquid water eliminated from system
Lectrodryer removes the water vapor
Air dried to −40°F. dewpoint contains .01#/hr. water vapor, 0#/hr. liquid water, so no chance for condensation even when atmospheric temperature drops severely

HOW DRY IS *Dry* COMPRESSED AIR?

Compression merely crowds the water into a smaller space . . . *Aftercoolers* condense water only to dewpoints determined by temperatures of their cooling water . . . *Separators* remove only the droplets of water too large to be carried over by the air stream . . . *Filters* merely do a somewhat better job than separators, catching more of the water in the liquid phase.

None of these catch the vaporous water in the air. That's where LECTRODRYERS step in to do real DRYing. If you need DRY air, gases or organic liquids, consult PITTSBURGH LECTRODRYER CORPORATION, 305 32nd Street, Pittsburgh 30, Pennsylvania.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

PITTSBURGH
LECTRODRYER
CORPORATION

units, the Lombard Variable Speed Drive uses the V-Belt as a control medium only, rather than for both drive and control—primary speed reduction being accomplished by conventional gearing methods. Through this new gearing arrangement 90% of the power goes through conventional gears while only 10% passes through the V-Belt—a minimum load which avoids the slippage so common with other power transmissions. The lower gear ratio also affords finer hairline control, insuring peak production speeds. Low maintenance is made possible as the easily accessible V-Belt is the only part likely to need replacement over a long period of time. The efficiency at low speed is equal to, if not higher than, the efficiencies usually attained. Having the variable speed output shaft furnished concentric with the motor shaft gives it the advantage of a direct line drive. Remote control is also available, with horizontally split casings optional.

As a result of this entirely new engineering approach, old limits of space, weight and horsepower are discarded and entirely new fields of application are available to designers and builders of machinery, as well as to plant production executives who are sure to consider the many advantages of this new speed transmission in their post-war planning.

Drum Pump

Vol-U-Meter Co., 79 Hilmerry Pl., Buffalo, 16, New York, are offering a special vacuum drum pump which is designed principally for salvaging the residues left in drums such as mineral oil drum and the like. Presumably the same pump could be used as a transfer mechanism.

New Kron Scale

A new catalog of KRON Scales made by YALE has just been prepared for the use of buyers of precision industrial equipment who are interested in investigating the benefits and savings of KRON Scales used as an integral part of a materials handling program.

Now ready for distribution, this catalog presents the full story of the entire KRON Scale line from dormant and portable platform types to special counting, batching, tensile strength and dynamometer models. Fully illustrated with complete specifications and dimensions of every standard KRON Scale, it is a valuable reference book for every business.

To promote a better understanding of the wide range of applications and the savings in production costs which follow when KRON springless industrial dial scales are used, the Yale & Towne Manufacturing Company, makers of KRON Scales, will be glad to send this catalog to any executive interested in increasing the efficiency of his own materials handling program through the use of precision industrial scales. Address your request to The Yale & Towne Manufacturing Company, Philadelphia Division, 4530 Tacony Street, Philadelphia, 24, Pa., and ask for catalog R-44 which will be mailed to you at no obligation.

Induction Heater

Dielectric heating, already responsible for speeding-up production in the manufacturing processes of plywood, plastics, laminates and food dehydrates is opening up new possibilities for improved products in the fields of packaging, paper, rubber, ceramics, meat sterilization, etc.

The model M-200 illustrated here and engineered by the largest producers of electronic heat treating equipment for the metal industry has been thoroughly tested for many months. It is a versatile, reliable, fully guaranteed piece of equipment. It has a rated output of 3½ K.W., a frequency of 20 Megacycles. It operates

from 205/245 v, 60 cycle, single phase line, and has a full load input of approximately 9 KV-A and a power factor of 90%.

Unlike most other types of generators, this equipment can be separated from the electrodes so that greater efficiency and plant layout may be obtained. Inquire Induction Heating Corporation, 389 Lafayette St., New York 3, N. Y.

Electron Microscope

To enable small laboratories to own an electron microscope the Radio Corporation of America has developed a small console model electron microscope which provides a magnification of 5000 with sufficient clarity of detail to permit photographs to be enlarged to 100,000 diameters. This instrument is made with a variety of power supplies and it is equipped with a vacuum system. Its power source is ordinary 110 volt current. The address of the Radio Corporation is Camden, New Jersey.

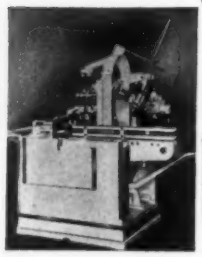
ARE *You*

KEEPING UP WITH THE

WORLD?

It's one thing to say to yourself, "Of course, we'll have to have a modern labeling set-up as soon as the emergency is over." But, judging from what so many top-notch producers of labeled goods are doing, it's much wiser to get a definite line of the one best Labeler for the job *now* instead of waiting until the last minute.

As the largest and longest established specialists in Labelers, WORLD labeling headquarters stand ready to work out detailed recommendations and estimates that will dovetail neatly into your planning program. Now is the time to get the story. Won't you get in touch with us?

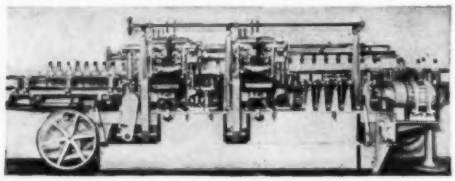


The WORLD Automatic TURRET Labeler

Which is best in the WORLD for YOUR Labeling?

A few simple facts about your production, containers and labels will quickly determine the right answer. Let us work it out for you —now.

The WORLD Model S Semi-Automatic Labeler



The WORLD Automatic BEE-LINE Straightaway Labeler

WORLD LABELERS

ECONOMIC MACHINERY CO.

WORCESTER, MASSACHUSETTS

Markomatic

This unit is compact and complete. It may be attached to any type of conveyor, filling machine; sealing unit, wrapping, packing, or bundling machine; rolling, extruding or laminating machine, or almost anywhere in your manufacturing process to mark either the products, its wrapping or container. It may be used to mark automatically control numbers, dates, codes, identifications, directions, part numbers, brands, weights, lot numbers or almost any information that may now be imprinted by hand, or as a separate operation.

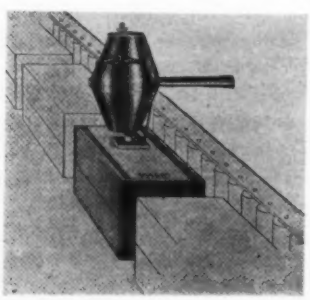
This Markomatic is easy to attach. It may be set up to do a marking assignment today, for the next week and then removed, to do another somewhere else in the plant. Having a Markomatic is equivalent to an extra employee.

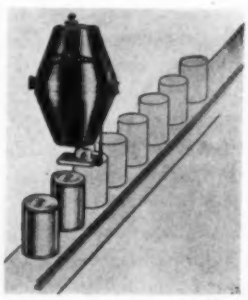
Markomatics are capable, at present, of marking an area 2½" x 3½". Imprinting medium may be rubber die or rubber, steel, or brass type with ink or steel or brass type to impress an imprint into soft material such as cardboard, chip-board or wood. Objects to be marked need not be stopped as long as they are traveling at a rate of speed approximately less than 10 feet per minute. The instantaneous kiss imprint of the Markomatic will produce an impression without blur or smudge. With these machines, units to be imprinted may vary slightly in location. The Markomatic will imprint whether this object to be marked is slightly nearer or further away than the previous one.

Imprints may be very carefully located or placed on your objects with the Markomatic. The switch provided is placed on your equipment to be operated by the object, to be marked, itself. As a result, the Markomatic does not operate unless there is something there to be imprinted. More than one Markomatic may be attached to imprint the same object from different sides at the same time.

Dies or type may be made easily interchangeable. Inking is automatic. Dies are inked twice, once on the down stroke and once on the up stroke of the imprinting ram.

The Markomatic is also available in a bench model. This model is designed for imprinting parts or objects with either an ink or an acid with a rubber die, or indent in soft materials such as, wood or cardboard with a steel die. This die may be permanent or made up with interchangeable rubber or steel type. This machine operates automatically in response to an electric foot switch. To





get an imprint on the part, the operator merely places the object on the impression table against a stop and then touches a foot switch.

A slight variation in thickness (up to ¼" thick) is automatically taken care of by the action of the machine. An ingenious design of the manufacturer's engineering department accomplishes this. The imprint ram will travel until the die meets the object to be marked, makes a kiss imprint and immediately retracts slightly. When the object is near, the retracting occurs sooner; when it is far. it occurs later.

The operator places the object to be marked on the Markomatic table in the fixture, touches her foot to the switch, the electric marking head is energized, the die is automatically inked and thrust out to make an instantaneous kiss impression. A new part is placed in the fixture, and the cycle is repeated. Production with this unit varies with the efficiency of the operator. With little training, operators have been able to reach capacities of 1500 pieces per hour.

At present, the imprint area that may be marked with one of these Markomatic units is 2½" x 3½". Markomatics are supplied with dies and special ink to mark, metal, plastic, corrugated, wood, paper, cardboard, fabrics, etc. The standard unit is designed for marking of a flat surface. Special units have been supplied for marking inside tubes of diameter more than 3". Other units have been developed for marking around the periphery of cylinders of diameter greater than 1½".

Other Markomatic machines may be supplied for taking products or parts from a magazine, imprinting them automatically and ejecting them.

Rapid Water Analysis Apparatus

The Aero-Titrater, a product of Chief Chemical Corporation, 1123 Broadway, New York City 10, furnishes the plant operator and laboratory technician with a rapid, precise method for the determination of hardness, calcium and magnesium in waters, both industrial and potable. It is also widely applicable to water problems in the process industries.

False endpoints are absent, and air agitation eliminates tedious and arm breaking shaking by hand. The accuracy is comparable with lengthy and laborious gravimetric methods, and substances ordinarily present in water do not interfere at all.

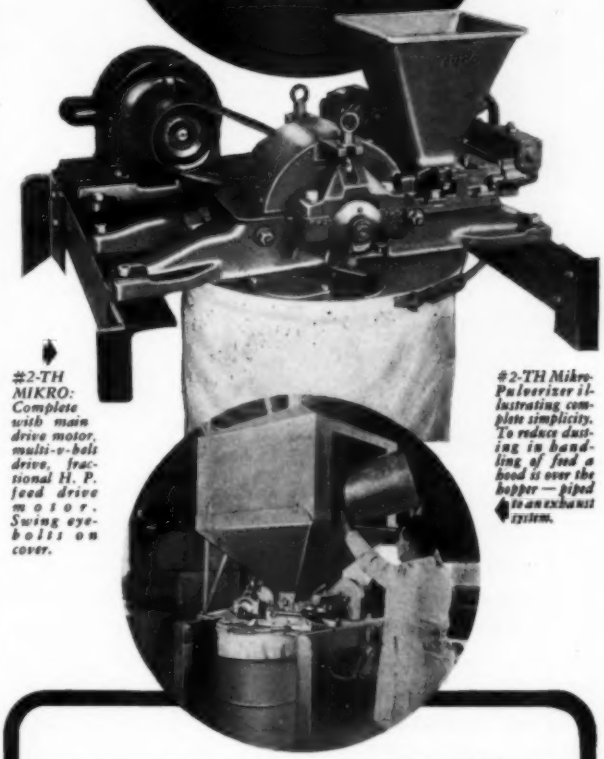
So simple is the apparatus that any operator can readily master its operation. It makes use of a new endpoint, based on the foam-meter principle. This endpoint is unmistakable and is reproducible with a high degree of precision. Determinations are made within ten minutes and there is no waiting time to observe stability of lather. The operation is foolproof and gives identical results with different operators.

The instrument is supplied calibrated and ready for assembly and use. There are no moving parts to wear out and no delicate features to go out of adjustment. All vital parts are of durable plastic construction.

The Aero-Titrater is devoid of the inherent and per-

One Step

FROM FEED TO FINISHED COSMETIC!



#2-TH MIKRO: Complete with main drive motor, multi-v-belt drive, fractional H. P. feed drive motor. Swing eye-bolts on cover.

#2-TH Mikro-Pulverizer illustrating complete simplicity. To reduce dusting in handling of feed a hood is over the hopper — piped to an exhaust system.

Do you require a more complete and uniform dispersion of color and perfume throughout your cosmetic powders or rouge?

Or a dependable particle size reduction to improve texture and blend?

Do you want to reduce color and perfume costs 25 to 30% — cut processing time as much as 50% — eliminate all pre-grinding, bolting and aging?

Regardless of your formula or color range, it's just *one step* from feed to finished face powder or rouge with the dustless compact MIKRO-PULVERIZER!

Free *Informative new 32-page catalogue showing the complete MIKRO-PULVERIZER line sent on request.*

Confidential FREE test grind on submitted samples.

THE MIKRO-PULVERIZER blends and pulverizes in one operation!

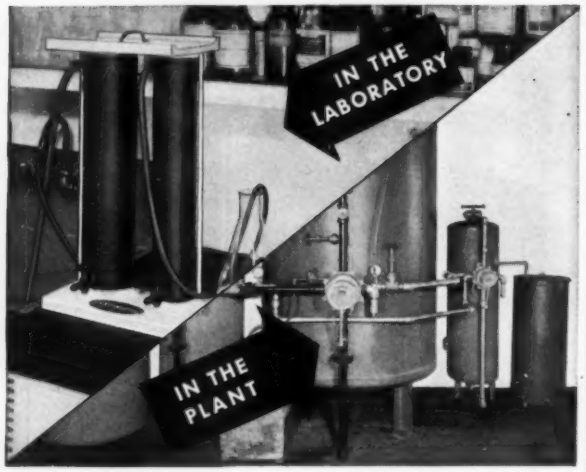
- Eliminates screening
- Keeps air dust-free
- Reduces cleaning time up to 90%
- Saves power from 25 to 75%
- Requires a minimum of attention of unskilled help — mesh controlled mechanically
- Needs little floor space — no steel or concrete foundations

PULVERIZING MACHINERY COMPANY

CHATHAM ROAD • SUMMIT, NEW JERSEY

De-ionized Water

***replaces* DISTILLED WATER**
at fraction of cost!*



WHETHER YOU USE the laboratory unit (ten gallons an hour), or one of the factory units with flow rates up to 50,000 gallons an hour, you are assured of uniform quality of purified water at all times. This modern, economical*, ion-exchange method provides water containing less than 1 to 5 p.p.m. of dissolved solids (plus colloidal silica, which can be removed if desired). It is meeting the most exacting standards in leading war industries:

SYNTHETIC RUBBER . . . AIRCRAFT ENGINE
ALUMINUM . . . MIRROR . . . METAL PLATING
CERAMIC . . . EXPLOSIVES . . . PHARMACEUTICAL
SILICA GEL . . . CHEMICAL . . . BUTADIENE
DISTILLERIES . . . LABORATORIES

FACTORY UNIT shown above (2,100 gallons an hour) is typical of ILLCO-WAY installations, which have been meeting exacting requirements for chemical and industrial purposes for over four years. Write for complete literature today.

** 10,000 GALLONS FOR LESS THAN $1*

ILLINOIS WATER TREATMENT CO.

847-10 CEDAR STREET — TESTED IN THE LABORATORY · ILLCO-WAY · PROVED IN THE FIELD — ROCKFORD, ILLINOIS

sonal errors of conventional hardness analysis procedures. It effectively supplants the standard soap method for all uses, but it does much more,—not only is it definitely more precise and rapid, it is also readily usable with waters which resist analysis by the traditional soap method. The ratio of calcium and magnesium present does not affect the determination; there is a single endpoint for stoichiometrically equivalent quantities of calcium and magnesium, regardless of the relative amounts present in the water.

Samples of 50 ml. or less are required. This is in contrast with gravimetric methods involving evaporation of one-half liter or more and subsequent precipitation waiting periods. The apparatus is equally at home in the field and in the plant. Chemists will find it a precision instrument thoroughly reliable in research work of the highest order.

So well does it function in the presence of interfering substances that it can be used directly with samples which contain chlorides up to 2000 ppm. Sulfates up to 1000 ppm. are also without effect. Large iron concentrations, and the treating and conditioning chemicals and compounds used in boiler waters do not interfere.

The versatility of the Aero-Titrater is further demonstrated by the ease with which micro determination of calcium and magnesium in boiler scales, minerals, plant ash, rocks, sediments, and similar materials is made. In many cases these determinations are carried out in the presence of practically all the impurities in the samples. They are simple, accurate and reproducible.

Micro-Film Records

It is interesting to notice the steady increase in use of micro-film in research and control laboratories. The use of such film makes possible the copying of laboratory records for compact permanent storage and it also permits photographing whole pages from technical literature. At appropriate times the films can be enlarged and reprinted. Laboratories also have a device which permits reading the film directly and saves the bother of making prints.

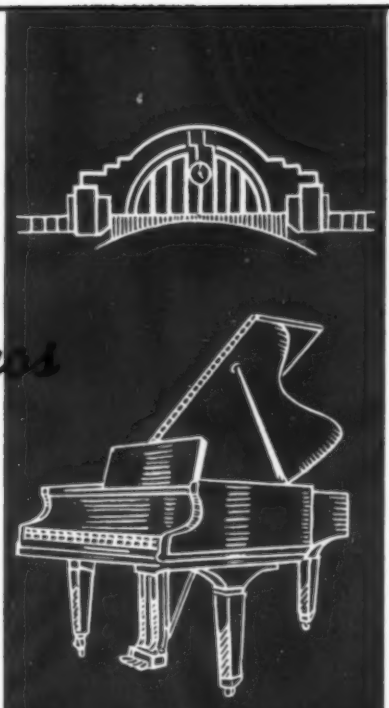
Dry Sterilizer

Dispatch Oven Co., Minneapolis, Minn., calls your attention to a hot air sterilizer which should be of interest. This sterilizer is designed to assure a smooth even flow of heat throughout the entire chamber. It is claimed that the sterilization action is positive and that it has been used for hypo needles, ampoules and pipettes. These sterilizers are available in a multiplicity of sizes. The same outfit makes a number of ex cellent laboratory ovens and dehydrators.

Laboratory Equipment Rentals

I have often wished that some laboratory supply house would set up a laboratory equipment renting agency from which rarely used pieces of equipment could be rented for short periods of time. Research workers are tremendously hampered in their efforts by lack of suitable equipment. Yet, they are not always in a position to justify the purchase of this equipment

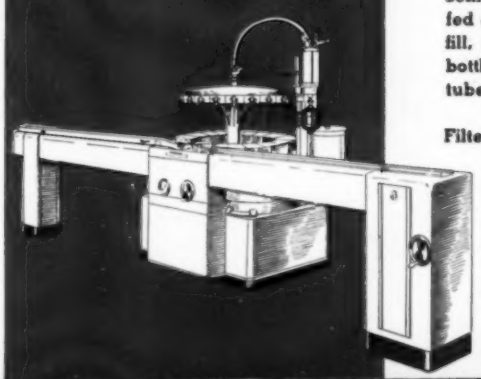
CINCINNATI CRAFTSMEN MAKE WORLD-FAMOUS *Pianos*



Cincinnati craftsmen for 75 years have been making pianos of international fame, and thus have afforded millions of people the joy which only music can bring. Reason: a special skill possessed by those Cincinnati-born and Cincinnati-reared.

CINCINNATI CRAFTSMEN MAKE WORLD-FAMOUS *Kiefer Filling Machines*

Cincinnati is the acknowledged machine tool center of the world. The Karl Kiefer Machine Co. has always selected its men from available "Cincinnati grown" craftsmen, for building its high-speed accurate bottling and packaging equipment. This explains why Kiefer machines have performed so well



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How to figure C.O.B.

	Present Seals	Alseco R-O's
Price of seals per 1,000		
Cost of applying 1,000 seals (Man and machine hours)		
Losses (rejects and returns caused by unsatisfactory sealing)		
Cost On Bottle per 1,000		

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because it is extremely expensive in some cases and is used very rarely. I am thinking of items like interfacial tensiometers, hydrophil balances, et cetera. Laboratories which are fortunate enough to be located in large cities sometimes can solve their problems by going to the local universities. The ability to rent such equipment would save a lot of time and help to keep down the money invested in rarely used laboratory equipment.

READERS' QUESTIONS

ENTERIC COATINGS: Will you kindly suggest any recent developments and methods of application of enteric coating substances? Any literature on the subject would be greatly appreciated. Baltimore.

Several articles and abstracts on the subject of enteric coatings have appeared in our publication. I would suggest that you read the following articles:

F. Chilson: Drug & Cosmetic Industry 47:441, Oct. 1940

M. A. Lesser: Drug & Cosmetic Industry 49:151, Aug. 1941

J. Brenner: Pharm. Act. Helv. 18:238, 1943 (Abstracted Drug & Cosmetic Industry, June 1944, p. 705)

A. H. A. Abbott & N. F. Allport, Pharm. J. 151:52, 1943 (Abstracted Drug & Cosmetic Industry, Oct. 1943, p. 435)

Recently the potentialities of cellulose acetate phthalate have been studied and reported in the Journal of Pharmacology & Experimental Therapeutics for March 1944; Abstracted Drug & Cosmetic Industry, July 1944.

WOOL WAX ALCOHOLS: Recently I saw an article stating that a combination of kerosene, wool fat and wool wax makes an excellent emulsifying preparation. Could you kindly inform me what wool wax is and where it is obtainable? Chicago.

Wool wax, or more properly wool wax alcohols are not available in the United States as far as we have been able to determine. Because of war conditions it has become official in the British Pharmacopoeia.

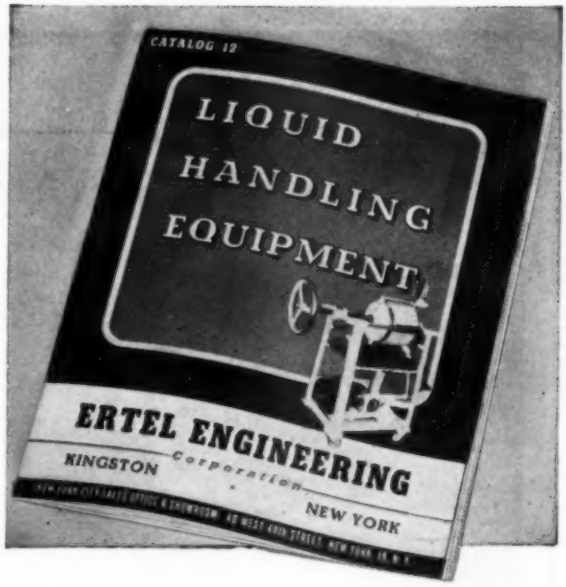
The nature of wool wax alcohol has been discussed quite extensively by E. S. Lower in the August and September 1943 issues of the British publication, "Manufacturing Chemist and Manufacturing Perfumer." According to this writer, these mixed wool wax alcohols are obtained from either raw wool grease or lanolin. These alcohols are a brownish-yellow waxlike material. Cholesterol seems to be the main constituent but the exact composition of this material is not known. However, it is known that it is a mixture of "wax alcohols," sterols and triterpene alcohols.

WAVE SET: We are interested in making a wave set that will dry rapidly and yet not be too sticky or greasy. Perhaps we could use something containing isopropyl alcohol. Can you make any suggestions? Chicago.

I would suggest that you try the following typical formula as a basis for experimentation:

Gum tragacanth	1.2
Alcohol	15.0
Glycerine	2.0
Water	83.0
Preservative	sufficient

Drying time can be increased by raising the proportion of alcohol. I see no reason why isopropyl alcohol may not be used in such a preparation, but you must realize that its typical odor may be a considerable factor in formulating a hair preparation. Anyway, it's worth trying.



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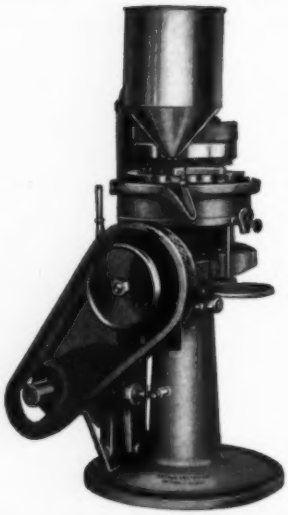

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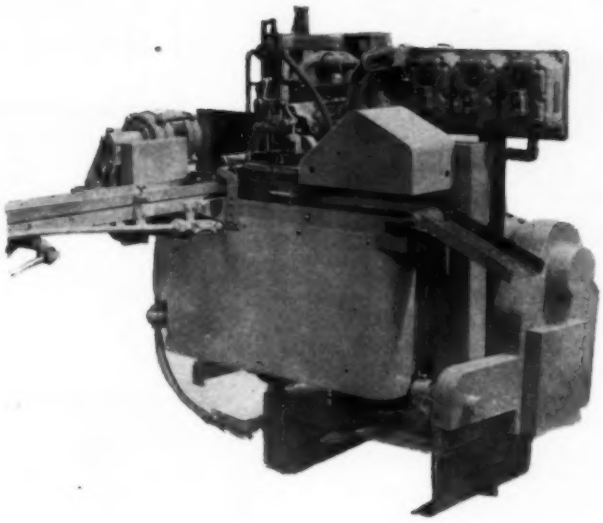
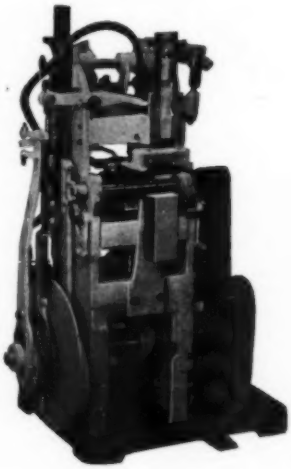


is working for Uncle Sam



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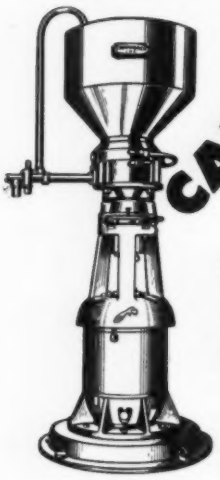

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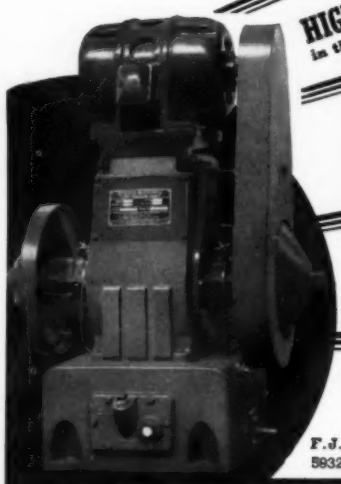

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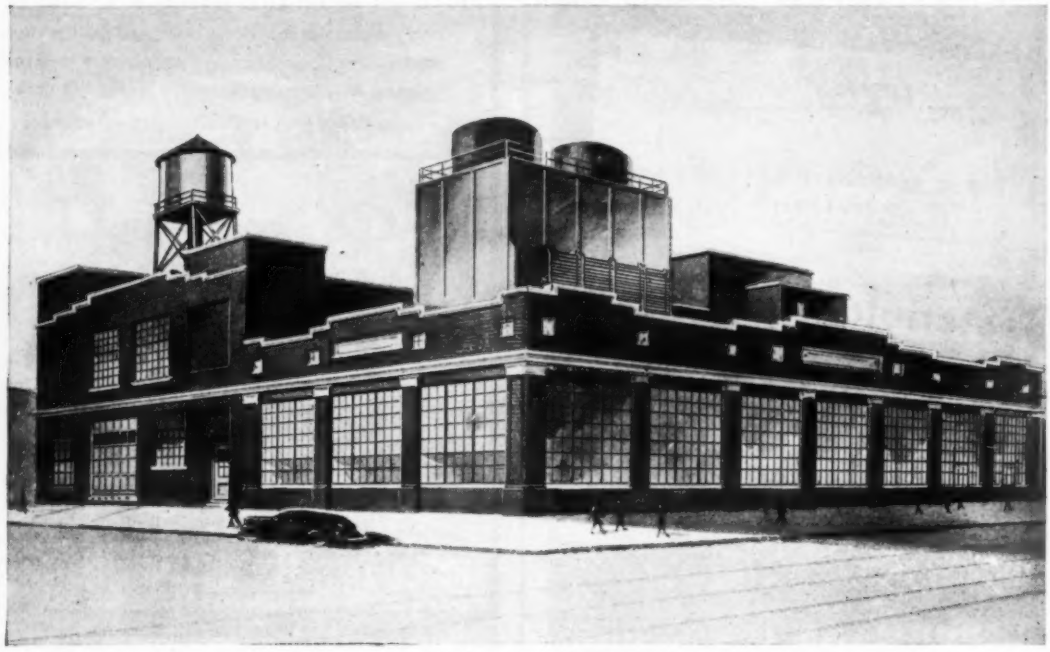

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Industry's Books

Organic Chemistry, by Louis F. Fieser, Sheldon Emery Professor of Organic Chemistry, Harvard University, and Mary Fieser, Research Chemist, 1091 pp., D. C. Heath and Company, Boston, Trade Edition $8, College Edition $6.

Fieser and Fieser's Organic Chemistry develops the fundamental principles of elementary organic chemistry in an orderly sequence, beginning with the Kekule theory of valence and its electronic counterpart and proceeding from the hydrocarbons to the alcohols, acids, and other derived substances. Aromatic compounds are introduced early and utilized throughout in illustrative examples, but the theory of the benzene ring and the nature of aromatic substitutions are discussed specifically in chapters in the latter part of the book. The presentation is in an easily readable, narrative style, with an extensive body of factual data included in the form of comprehensive tables and citations under formulas. A useful feature is the illustration of type reactions by means of actual examples of a practical nature, usually documented with data concerning the conditions of the reaction and the yield. A novel and valuable feature of this work is the inclusion of a number of chapters dealing with significant applications of organic chemistry to technology and to the biological and medical sciences. These "essay" chapters, extensive enough to provide a practical orientation in the fields concerned, are interspersed throughout the book and include both the historical perspective and present-day concepts and applications.

Uses and Applications of Chemicals and Related Materials, Vol. II, by Thomas C. Gregory, 459 pp., Reinhold Publishing Corp., New York, $9.

This is Volume II of "Uses and Applications of Chemicals and Related Materials." An inspection of the book shows that it complements Volume I—published in 1939—and makes it even more useful. It also supplements the first volume, covering 2642 chemicals and related materials which were not treated in Volume I. The various indexes (a new feature) also provide very valuable information in a very accessible and useful method of presentation. The "Uses and Applications, etc." section of the book (Part 2) is again founded on material published and copyrighted in the Oil, Paint and Drug Reporter in the intervening years.

Health And Human Welfare, by William E. Burkard, Ph.D., Raymond L. Chambers, Ph.D., and Frederick W. Maroney, M.D., 640 pp., Lyons & Carnahan, Chicago, $1.80.

This is a textbook on health for secondary schools. Dr. Burkard is District Superintendent of the Philadelphia Public Schools, Dr. Chambers is Principal, Philadelphia Public Schools, and Dr. Maroney is Dean of Students and Chairman of the Department of Personnel Service, Brooklyn College. The book has been carefully organized to help students understand the basic facts concerning health and disease.

A Manual Of Physical Therapy, by Richard Kovacs, M.D., Professor of Physical Therapy, New York Polyclinic Medical School, Third Ed., 309 pp., Illus., Lea & Febiger, Phila., $3.25.

War time conditions have brought about a full appreciation by the medical profession of the value of well planned and well applied treatment by physical agents:—heat, light, electricity, water, massage and exercise. In view of these facts, this concise manual of physical therapy methods should serve as a welcome aid in elementary training courses. With this in view, the author's previous work, "Physical Therapy for Nurses," has been rewritten, amplified and brought up-to-date to furnish a comprehensive volume designed to meet the needs of war time and post-war time physical therapy work. It presents a brief expose of the basis and the evolution of physical therapy in a systematic presentation of the physics, physical and physiological effects, clinical uses, technique and application, dangers and contraindications of each of the principal physical treatment methods.

Introduction To Quantitative Analysis, by Saul B. Arenson, Professor of Inorganic Chemistry, University of Cincinnati, and George Rieveschl, Jr., Parke, Davis and Company, 386 pp., Thomas Y. Crowell Co., New York, $2.75.

This text combines the three essentials of a fundamental course in quantitative analysis, namely adequate theoretical background, proper laboratory practice and procedures, and an ample selection of graded problems. Incorporated are many features not ordinarily found in quantitative analysis texts, such as: theoretical treatment of such topics as colorimetry, turbidimetry, adsorption indicators, potentiometric titimetry, and other electrochemical applications, in addition to the conventional titrimetric and gravimetric methods; early introduction and emphasis on titrimetry, reflecting the wider application of these methods in both industry and education; extended discussion of organic reagents; early introduction of experiments for rapid completion—within an hour or less; a large number of experiments in order to provide the instructor with a wide choice.

The Control of Germany And Japan, by Harold G. Moulton and Louis Marlio, 116 pp., The Brookings Institution, Washington, $2.

This is a careful analysis of the various political and economic schemes which have been proposed to keep Germany and Japan from undertaking future wars of aggression. It discusses each one in turn and presents the conclusions of the authors as to which are likely to be futile and which promise to be effectual. In the end, the authors find that control by military force is the only effective means of checking aggression. It will be less costly, less difficult, and less disturbing to economic conditions both inside and outside the controlled countries, the authors contend.

Vanillin

Within several weeks of each other DeSaire and Tiemann discovered Vanillin by different methods of procedure. Heretofore the Vanilla flavor was obtained only from the Vanilla bean which would yield from finest grade A beans about one lb. of natural Vanilla per 175 lbs. With beans at $7.50 per lb. and Vanillin at $2.75 per lb. it meant a decided saving to the manufacturer of Vanilla flavor. The user however, was at first reluctant to use the artificial product and it was only due to shortages of the beans during bad crop years that the Vanillin increased in demand. Today it is believed that without this valuable synthetic the demands for Vanilla could not be supplied. In making the pure Vanilla extract by percolation of the beans it requires extensive tests to be sure the flavor is uniform but when using Vanillin the same amount can be weighed and the flavor tends to be more uniform.

Today there are three different types of Vanillin: I: That made from Eugenol; II: Guiacol Vanillin; III: Lignin Vanillin. The material from Eugenol is still apparently in greatest demand by the user. Guiacol Vanillin is of coal tar origin, slightly lower in price but not as popular as the Eugenol derivate. Lignin Vanillin was produced several years ago as a by-product from wood pulp. In addition to its use in flavoring it has wide usage in the perfume and cosmetic trade.

Perfumer's Shelf

Studies on American Verbena

In a pharmacognostical study on certain American species of verbena, C. J. Zufall and W. O. Richtmann (*Pharm. Arch.* 15:1, 1944), give details on the percentage yields obtained with various selective solvents. Thus, *Verbena stricta* Vent. when extracted with various selective solvents yielded the following per cents of extract: petroleum ether 1.62, ethyl ether 1.6, ethyl acetate 0.70, acetone 5.48, absolute alcohol 6.19, aqueous alcohol (50:50) 8.37, and water 8.70. Fifteen per cent of a fixed oil was also obtained. This oil was yellow, slightly viscous and had a faint odor and disagreeable taste. Its specific gravity at 25° C. was 0.921, its acid value was 19.0 and its saponification value 165.26.

The same selective solvents applied to *Verbena urticaefolia* L. yielded extracts as follows: petroleum ether 1.26, ethyl ether 11.30, ethyl acetate 1.06, acetone 0.10, absolute alcohol 2.16, aqueous alcohol 1.54, and water 2.66 per cent. Milled, air-dried samples of *Verbena bracteosa* Michaux yielded the following extract percentages: petroleum ether 2.90, ethyl ether 0.04, ethyl acetate 4.03, acetone 0.73, absolute alcohol 3.17, aqueous alcohol 9.28, and water 7.13.

Heavy Metals in Volatile Oils

According to K. L. Kelly in the *Bulletin of the National Formulary Committee* (12:56, 1944), the application of the method of Bell and Krantz (*J.A.-Ph.A.* 31:533, 1942) for the detection of heavy metals in volatile oils yielded the following results, in terms of parts per million, in a series of oils tested:

Bitter orange oil	**3 parts**
Bergamot oil	**5 parts**
Myrcia oil	**4 parts**
Sandalwood oil	**3-4 parts**
Thyme oil	**3-6 parts**

Lobelia in Perfumes

In considering the post-war perfume picture, K. N. Richardson (*S.P.C.* 17: 488, 1944) mentions the possibilities of using lobelia in making Lobelia Perfumes. Although lobelia has never been extensively used in perfume compositions in England, continental workers have given it some attention and have worked out basic formulas. According to Richardson, about 250 varieties of the lobelia family are in existence, the principal kinds growing in Europe being *Lobelia urens L.* and *Lobelia cardinalis*, while *Lobelia Erinus L.* is also grown as an ornamental plant. The leaves of the American variety, *Lobelia inflata L.*, contain the readily decomposed alkaloid, lobelin, $C_{12}H_{23}NO_2$, a light yellow viscous liquid with a spicy odor. On account of the strong tobacco-like taste of the alkaloid, the plant has been given the name of "Indian tobacco." The principal variety grown in England is *Lobelia Dotmanna*. This also occurs in France, Germany and other European countries.

Constitution of Irone

In a report on the constitution of irone, A. Muller (*Deut. Parfum.-Ztg.* 28:137, 1942, through *Chem. Abstr.* (38: 4377, 1944) states that pure commercial irone, iris oil carefully prepared from iris root, and alpha-ionone do not give the EM reaction. Therefore, natural irone has an alpha-irone constitution corresponding to alpha-ionone. The positive EM reaction of some commercial iris oils can be explained by the presence of beta-irone, provided no other beta-compound has been added.

The EM test requires two solutions:—Solution A: 10 Gm. phosphoric acid in 100 cc. glacial acetic acid; Solution B: 5 Gm. para-dimethylaminobenzaldehyde in 100 cc. glacial acetic acid. One cc. of each of these solutions is added to 0.1 to 0.5 Gm. of the substance to be tested in 5 cc. of glacial acetic acid. Iris oil and irone which have been properly prepared give almost no color with the EM reagent. In contrast, beta-ionone gives an orange-red coloration with this reagent in only five minutes.

Coffee Flower Absolute

In studies at the Puerto Rico Experiment Station, reports N. G. Arrillago (*J. New York Botan. Garden* 45:181, 1944), the possibility of developing new absolutes was investigated and of those tried, that of the flowers of the coffee tree (*Coffea arabica*) showed the most promise.

Investigation showed the infeasibility of steam distillation of the flowers as well as the poor yields by extraction with lard (enfleurage) and by maceration with mineral oil. The best method of extraction so far obtained has been by solvents to obtain a total extract or concrete which can be purified with alcohol to give an absolute. Petroleum ether was found to give the highest yield, while ethyl ether gave a lower yield but a higher quality product. In an attempt to increase the yield of absolute, it was found that pressure and desiccation treatments lowered, while freezing increased, the yield, although the increase was only very slight. The freezing treatment has an additional ad-

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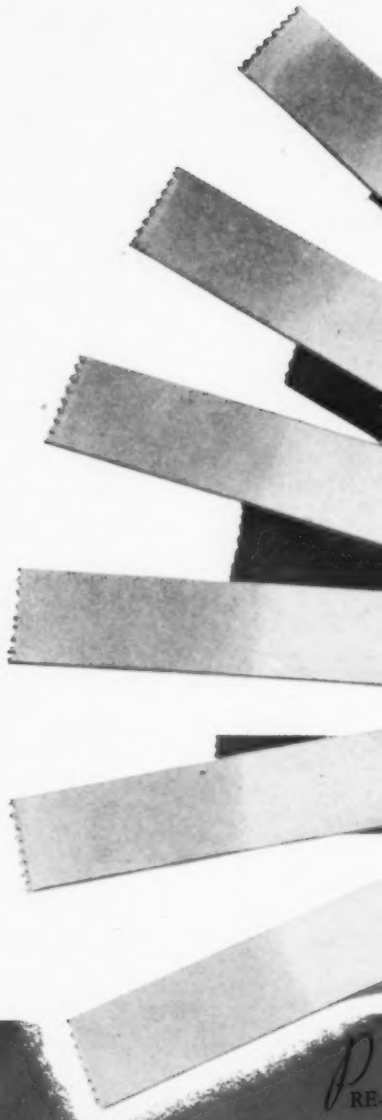

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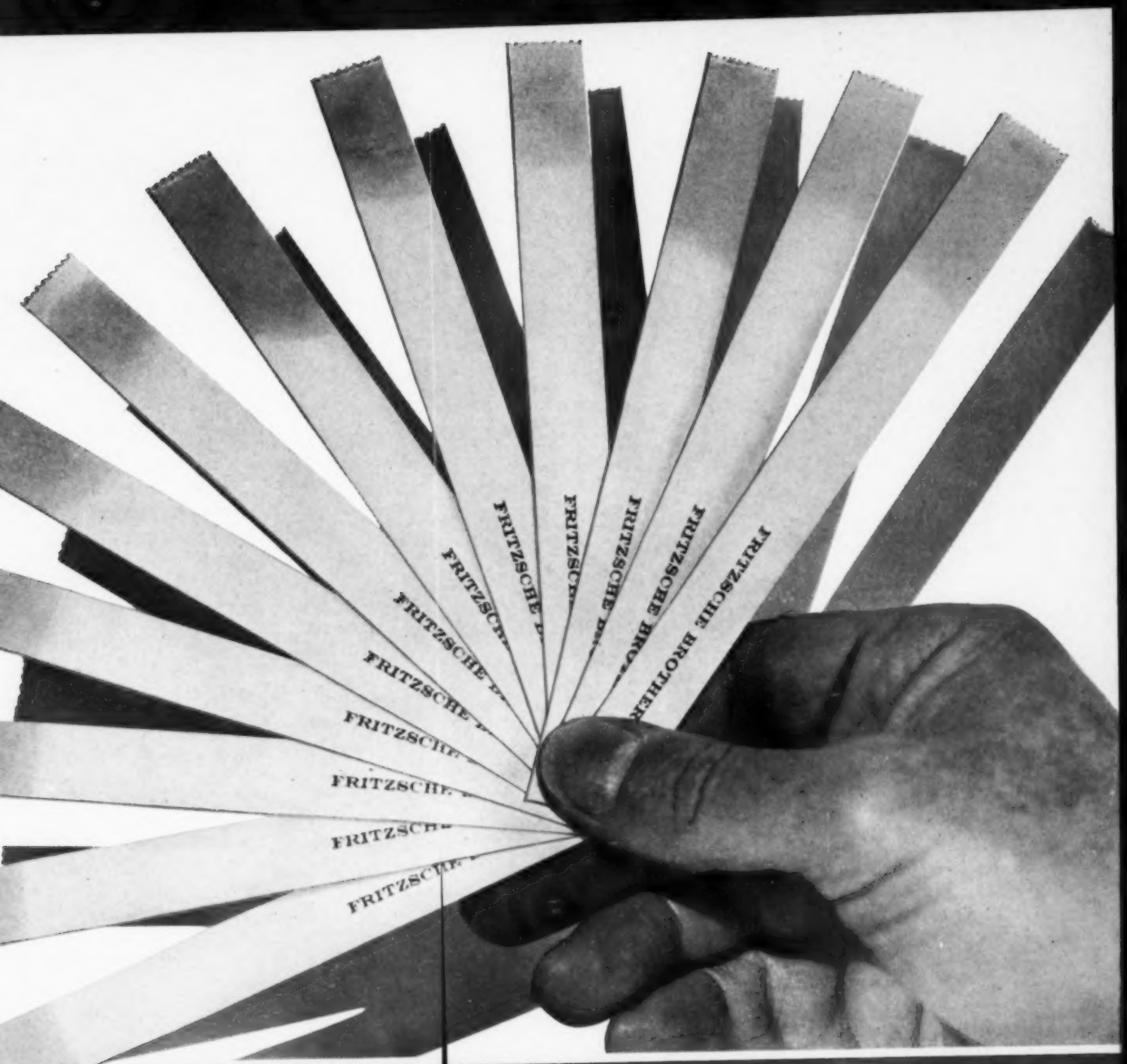
APPLE BLOSSOM

An excellent base for floral bouquets, fancy bouquets and powder perfumes. Imparts the sweet, delicate, ever-appealing fragrance of apple blossoms.

PURPLE CARNATION

This provides a pleasant variation of carnation with a tonality that is deep, warm and appealing.



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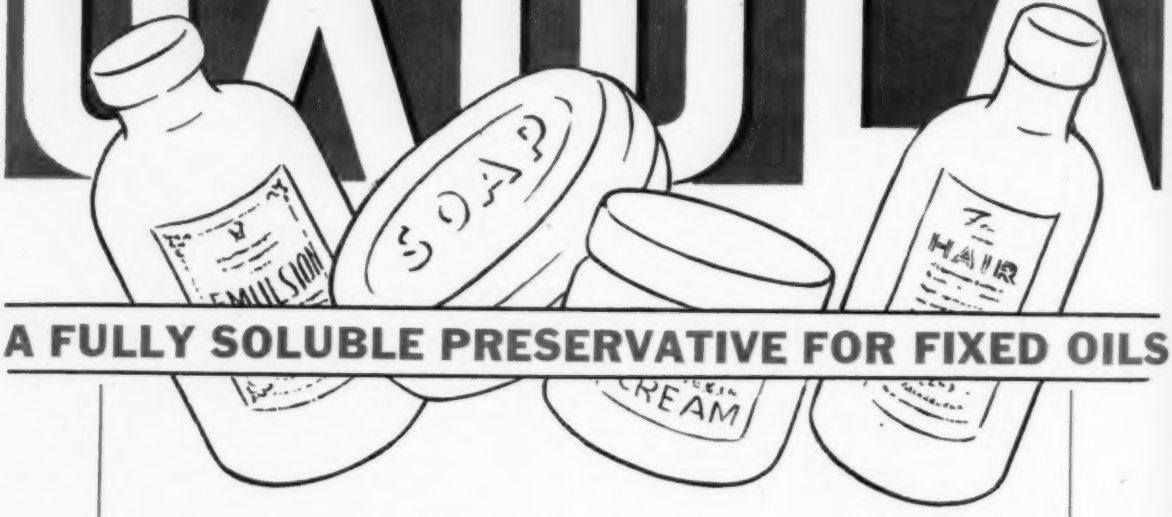

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vantage as a method of storing flowers until such time as convenient for extraction. An interesting comparison was made of the absolute obtained from the Puerto Rican coffee trees that have run wild with that from the cultivated species, *Coffea robusta*. Flowers from the cultivated plants outyielded the "native" *C. arabica;* however, the latter gave a more agreeable absolute.

The absolute has an agreeable aromatic perfume remindful of the bouquet of jasmine, cassie, and mimosa. Many essential-oil dealers who have examined the product have expressed considerable interest and enthusiasm over its possibilities.

Vanillin and Coumarin Determination

D. T. Englis and D. J. Hanaban (*Ind. & Eng. Chem.*, Anal. Ed. 16:505, 1944) have developed a new ultraviolet absorption method for the determination of vanillin and coumarin in flavoring extracts. The method for the analysis of both genuine and imitation vanilla extracts is given in considerable detail in their paper but, in brief, the procedure involves a dilution, precipitation with lead acetate, extraction with ethyl ether, and dilution of the ether extract to a large volume with water. The quantity of total vanillin and coumarin in the solution is estimated from the absorption at 2875 A. and the quantity of each from a simple equation involving values at 2313 A. The method is rapid and convenient and the results are of good reproducibility. Tests with mixtures of known composition indicate good accuracy. A slightly modified and simpler procedure not employing ether extraction is employed for pure vanilla extracts.

Distinctive Eucalyptus Oils

According to a note in *Science News Letter* for Aug. 26, 1944, over 300 species of eucalyptus trees are known, and each produces its own distinctive oil.

Dermatitis from Lemon Grass Oil

Dermatitis has been reported from contact with many plants and grasses, but after a careful search, H. V. Mendelsohn found that there have been no reports in the literature of dermatitis caused by lemon grass oil (*Cymbopogon citratus* or *Andropogon citratus*. Writing in the *Archives of Dermatology and Syphilology* (50:34, 1944), he reports that during November 1943, he observed eight men of Scandinavian stock, of a group of about 30, in whom patches of dermatitis appeared on different parts of the cutaneous surface. These men had worked for about three weeks as machinists, carpenters and riggers on a boat which recently arrived from India. Part of the cargo were tanks of lemon grass oil, some of which spilled and evidently found its way to different parts of the boat. Lesions appeared six to eighteen days after the men began working on the boat, and the eruptions resembled poison ivy dermatitis. Mendelsohn was unable to obtain a sample of the oil for use in patch testing, but a piece of wood soaked in the oil served this purpose. Four of the patients gave a strongly positive reaction. Use of a soothing antipruritic lotion and a bland ointment caused the lesions to heal within ten to twenty days.

Since lemon grass oil evidently has many uses, including its employment in the manufacture of perfume, as an adulterant for lemon oil, in the manufacture of ionone and possibly other substances, Mendelsohn feels that it should be looked on as an important cutaneous irritant and should be thought of when considering etiologic agents of contact dermatitis.

Camphene from Pinene

In a paper on the synthetic production of camphor from pinene, V.B.G.S. Acharya (*J. Univ. Bombay* 12A:Pt.5, 29, 1944) reports that the conversion of pinene hydrochloride to camphene was accomplished in 90 per cent yield by refluxing a mixture of 1 mol. pinene hydrochloride, 2 mols. sodium stearate, 1 mol. sodium carbonate and 1 mol. sodium hydroxide for twenty-four hours. Distillation, followed by washing with water, gave semi-solid camphene. Soaps from the following natural oils substituted for sodium stearate gave camphene in the yields indicated: mowda 90 per cent, mutton tallow 87 per cent, coconut 84 per cent, castor 73 per cent, linseed 71 per cent, ground nut (peanut) 69 per cent, and cottonseed 68 per cent.

Studies on Buchu

According to H. S. Feldman and H. W. Youngken (*J.A.Ph.A.*, Scientific Ed. 33:277, 1944) the National Formulary VI recognizes the leaves of three species of the genus *Barosma* as sources for Buchu, namely: *Barosma betulina* (Thunberg) Bartling et Wendland or "Short Buchu," *Barosma crenulata* (Linne) Hooker or "Oval Buchu" and *Barosma serratifolia* (Curtis) Wildenow or "Long Buchu." The leaves of other species of *Barosma* and also of *Empleurum* have appeared on the drug market as adulterants or substitutes for Buchu.

Authentic samples of the three official species, obtained from the Union of South Africa, and additional specimens from American sources were used in an extensive pharmacognostical study of Buchu. As part of this work Feldman and Youngken gave due consideration to oil of Buchu; distilled from the leaves of several species of Baromosa. According to these workers Brandes first prepared the volatile of Buchu in 1827. He reported 0.88% as the average yield. Bedford experimented with *B. crenulata* and *B. serratifolia*. He stated that the former yielded more oil than the latter, the yields being 1.21% for the Oval Buchu and 0.66% for the Long Buchu. In 1890, Thompson recorded the percentages of oil in *B. betulina*, *B. crenulata* and *B. serrafolia* as 1.45, 1.6 and 1, respectively. A report by Schimmel and Co. gave the yield of oil from *B. crenulata* as 1.7%. The average yields recorded by Gildemeister were 1.3% to 2.5% for *B. betulina*, 1.7% for *B. crenulata* and 0.8% to 1% for *B. serratifolia*. Parry states that the yield of oil from the 3 official Buchu species is from 1% to 2%. The American Pharmaceutical Association Laboratory has investigated the volatile oil content of *B. betulina* and *B. crenulata* and found that they yielded 1.9% and 2.2%, respectively.

These figures may be compared with those of Feldman and Youngken, given in the table below; their determinations being made by means of the Clevenger method:

Volatile Oil of Buchu

Sample	Yield, %	Average Yield %
1 (*B. betulina*))	2.1	
1*a* (*B. betulina*)	1.8	1.95
2 (*B. crenulata*)	1.8	
2*a* (*B. crenulata*)	1.5	1.66
3 (*B. serratifolia*)	0.89	
3*a* (*B. serratifolia*)	0.82	0.85
4 (*B. betulina*)	2.0	
4*a* (*B. betulina*)	1.9	1.95
5 (*B. crenulata*)	1.7	
5*a* (*B. crenulata*)	1.8	1.73
6 (*B. serratifolia*)	0.81	
6*a* (*B. serratifolia*)	0.73	0.77

The constituents of the volatile oil of Buchu has been determined by several workers. These ingredients are diosphenol, a crystalline solid, the terpenes limonene and dipentene, and a ketone called laevo-monthone. It has been said that the activity of Buchu leaves is due to a camporaceous substance called "ketophenol" which is present in considerable quantities in the volatile oil. Oil of Buchu has some antiseptic properties and has been used in medicine.

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NUX VOMICA
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Vitamin A for Hypertension

Working on a suggestion made by other investigators, A. Pond and A. M. Rosen (*Rocky Mt. Med. J.* 41:242, 1944) administered 200,000 units of vitamin A daily to patients with essential hypertension. With this dosage, they noted that there was a gradual fall in blood pressure of 10 patients. The majority of these responded favorably over long periods of time. There were no untoward reactions. Some investigators suggest that the fact that vitamin A in high dosage raises the urea clearance of dogs 40 per cent above normal may indicate that the vitamin may disturb the pathophysiologic pressor mechanisms produced by renal artery constriction. Another possibility is that the antihypertensive action of vitamin A may be totally unrelated to its specific vitamin effects and that one or more chemically related compounds with little or no vitamin action may prove to be more effective than vitamin A as hypotensive agents.

Nail Polish for "Red Bug" Bites

According to C. D. Fowler (*U. S. Naval Med. Bull.* 42:1037, 1944) the Trombicula irritans (the common red bug, harvest mite, chigger) is distributed over most of the southern states and also is found in many tropical countries. It should not be confused with the sand flea which is also called the chigger in some localities. Often quite a problem with troops in certain areas the lesion caused by this pest is indeed discomforting, producing a most intense and aggravating itch which persists for several days. When the insect locates and feeds, an area of inflammation is set up in the adjacent skin. The individual who has been bitten resorts to scratching in order to reduce the discomfort caused by the itch.

Various ointments, lotions and baths have been recommended to relieve the condition, with varying results. It has been found by Fowler from both personal use and by trial on many patients that there is one treatment which is immediately and almost completely successful. This treatment consists in painting each lesion with a good coating of collodion or fingernail polish. The collodion or fingernail polish forms a thin film over the affected area which cuts off the supply of air and causes the death of the parasite. At the same time it prevents clothing and other articles from touching the lesion and this produces a decrease in itching. It is quite necessary to instruct the patient absolutely not to scratch the treated area because with this treatment when there is no scratching, there is very little itching. Scratching causes the itching to begin again.

Synergistic Sulfanilamide Mixture

The problem of destroying the sulfonamide inhibitors when treating wounds with the sulfa drugs has attracted considerable attention. One of the recent contributions toward a solution of this problem is given in the report of J. A. Dingwall (*Am. J. Surg.* 64:326, 1944) in which a synergistic sulfanilamide mixture was tested both experimentally and clinically for the treatment of wounds. Because both azochloramid and urea enhance the activity of sulfonamides and because both compounds have been used extensively in the treatment of wounds as an aid to surgery, Dingwall decided to combine them with sulfanilamide. A buffer mixture was added and there was also included a small amount of a wetting agent to insure even distribution and better penetration of the active ingredients. The composition of the preparation, made as a stable powder of between 40 and 80 mesh particle size, was as follows:

Urea	**9.5 per cent**
Disodium phosphate	**5.0 per cent**
Sulfanilamide	**75.0 per cent**
Calcium carbonate	**10.0 per cent**
Azochloramid	**0.1 per cent**
Granulating agent	**0.2 per cent**
Sodium tetradecyl sulfate	**0.2 per cent**

Tests by Dingwall and other physicians showed that the use of this powder resulted in quicker cleaning up of wounds; fewer treatments at longer intervals were required; no evidence of tissue injury and no caking of the powder in the wounds.

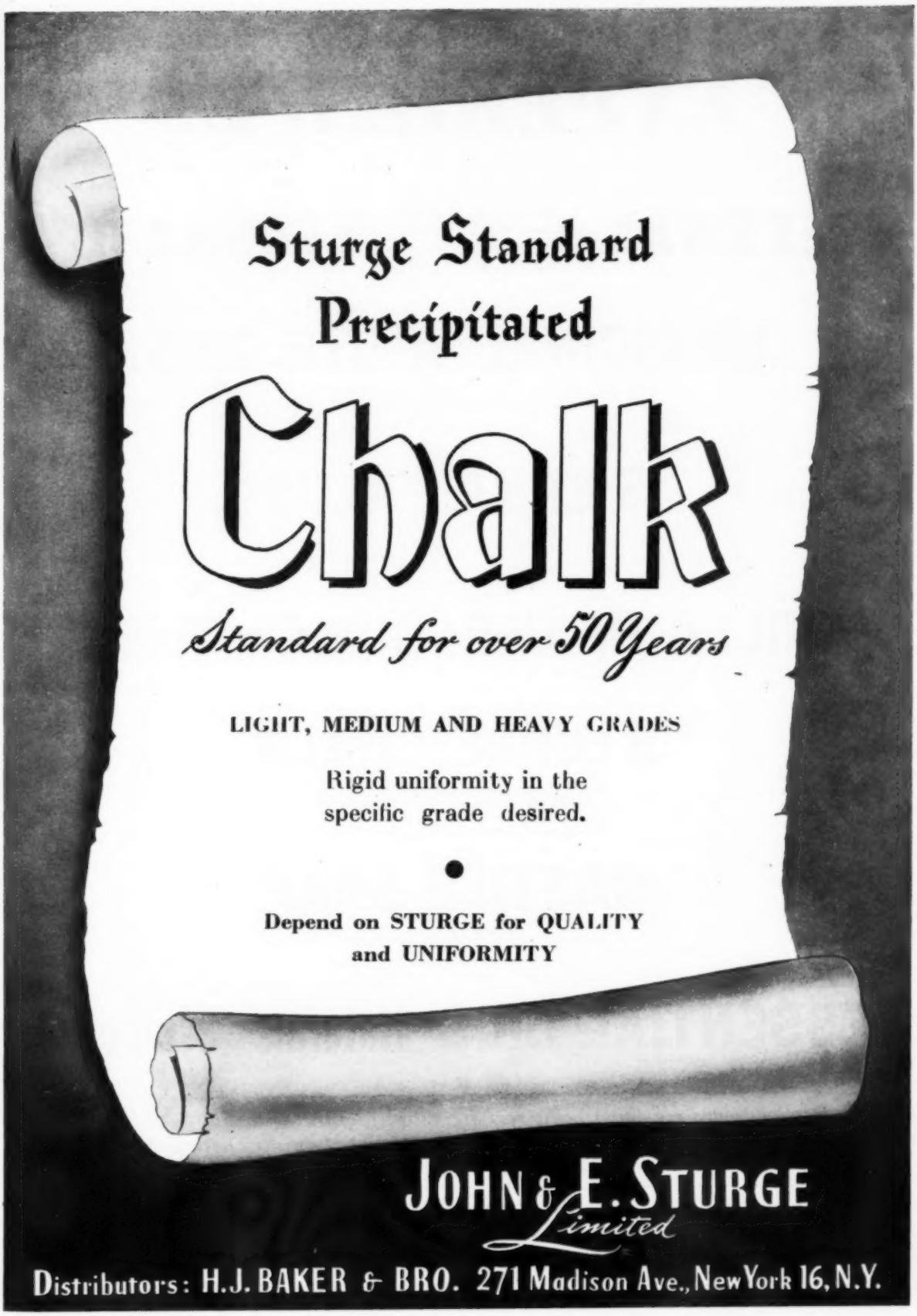
Cellophane Dressings for Burns

It has been recognized that manipulation of a burned area to check the progress of healing, clean the lesion or similar procedures may retard recovery. Of interest in this connection is Farr's suggestion in the *British Medical Journal* (1:749, 1944) that there be used an occlusive dressing medicated with sulfanilamide through which the burned area may be easily inspected. This can be achieved by the use of cellophane and 10 per cent sulfanilamide ointment. The cellophane sheets may be medicated, sterilized and stored for immediate use as needed or the ointment may be spread on sterile sheets of cellophane just before application. All types of transparent wood-pulp tissue have been used. The transparent tissue is sterilized by first dusting it with talc and then autoclaving at 15 pounds pressure for 20 minutes. Following this, the talc is dusted off and the cellophane is placed flat on a sterile towel and a thin layer of sulfanilamide ointment is spread on. It is then folded four times, with the non-medicated surface to the outside. All the burns treated with this dressing were of the second degree and results were found to be uniformly successful.

Lactic Acid Poisoning

Ordinarily, lactic acid is not considered as poisonous. Recently, however, E. G. Young and R. P. Smith (J.A.M.A. 125:1179, 1944) were called on to investigate the cause of the death of three premature infants; all being fed the same lactic acid milk mixture. Death was attributed to an excess of lactic acid in the infants' food, resulting in hemorrhage and erosion of the gastric and duodenal mucosa such that death resulted in toxemia from severe gastroenteritis. Experiments on rabbits with a similar lactic acid milk mixture confirmed the toxic nature of the preparation; the symptoms and findings in the animals being identical with those of the infants.

Hence Young and Smith are of the opinion that lactic acid must therefore be regarded as a corrosive poison, and due care must be exercised in its use as an infant food.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Mold Checks Growth of T.B. Bacilli

A mold, as yet unidentified but probably belonging to the Penicillin group, has been found capable of inhibiting the growth of *mycobacterium tuberculosis*. In preliminary experiments with this mold, found growing on a culture of tubercle bacilli in the ice box, D. K. Miller and A. C. Rekate (Science 100:172, 1944) injected a suspension made by mixing strains of human type tubercle bacilli with a ground suspension of the mold into a group of thirteen guinea pigs. Seven of these guinea pigs are alive and have negative tuberculin tests, whereas all of the control animals have died.

Suspensions of the mold inactivated 1:100 tuberculin in two hours. The supernatent fluid obtained after centrifugation of the mold suspension also inactivated 1:100 tuberculin. However, when the supernatent fluid was passed through a bacterial filter, the filtrate did not inactivate tuberculin. Other experiments indicate that the substance produced by this mold is not similar to penicillin, even though it may belong to the Penicillium group. These studies are continuing and much work remains to be done before a truer evaluation of this mold's action can be attained.

Reactions to Penicillin

One of the outstanding virtues of penicillin is its comparative freedom from undesired effects. Nonetheless, reactions to penicillin have been reported in the literature and, lately, with increasing frequency. In the main, however, these reactions have not been especially serious, as has so often been the case with the sulfonamides. In some instances, as in the case reported by Roxburgh et al (*Brit. Med. J.* 1:824, 1944), the skin irritation observed was attributed to the impurities present in the penicillin used in the local treatment of dermatological conditions.

What appears to be the first case of contact dermatitis from penicillin was reported by H. D. Pyle and H. Rattner (*J.A.M.A.* 125:903, 1944). According to their findings, the skin irritation which developed in the medical officer in charge of the penicillin section of the Gardiner General Hospital, Chicago, was due to the penicillin itself and not the medium upon which the mold was grown. Three hospital corpsmen who handled penicillin have at times experienced slight itching of the skin, but showed no signs of dermatitis.

At about the same time W. N. Graves, C. C. Carpenter and R. W. Unangst (*Arch. Dermat. & Syph.* 50:6, 1944) reported that in two cases therapy with injections of penicillin in patients who had chronic infections resulted in the production of typical vesicular lesions within twenty-four hours of administering the drug. More recently, H. Welch and A. Rostenberg, Jr. (*J.A.M.A.* 126:10, 1944) observed a person who showed a "tuberculin type" of hypersensitivity to crystalline penicillin sodium. Although the man had had no prior exposure to penicillin, he has had intimate contact with molds over a period of years. According to Welch and Rostenberg, the significance of such a hypersensitivity when penicillin is to be used therapeutically is unknown.

Impregnated Stockings for Ringworm

Because good results have been obtained in treating fungous infections of the hands and feet by means of iontophoresis of copper sulfate, P. J. Crittenden and L. S. Joiner (J. Lab. & Clin. Med. 29:606, 1944) decided to try the effectiveness of fungicide-impregnated cotton stockings for treating athlete's foot. They felt that such a method would be effective not only because hose are in close contact with the foot during waking hours but also because treated hose bring the fungicide in contact with the shoe lining, which frequently is a source of reinfection. The experimental work was begun using solution of copper sulfate for impregnating the cotton hose. Later copper acetate was substituted for copper sulfate in cases not responding satisfactorily. Clean dry cotton socks of good grade were soaked for thirty minutes in the solution of copper salts at 40° C. After drying, the hose were ready for wear. The subjects cooperating in the study were 17 men and 1 woman, each of whom was afflicted with ringworm. They wore cotton hose impregnated with copper sulfate or acetate for periods of from one and one-half to ten months. The skin of 6 appeared normal, 11 showed improvement and 1 was worse at the end of the experiment. The acetate seemed to be more beneficial than the sulfate.

Prolonging Penicillin Action

With methods of production and use of penicillin well established, workers are seeking ways to overcome this agent's rapid elimination from the system and to prolong its action in the body. Another step in this direction is given in the report of M. J. Romansky in *Science* (100:196, 1944). Because beeswax has been used to prolong the effects of other rapidly-acting drugs, he employed this substance to serve a similar purpose for penicillin. Peanut oil was used in conjunction with the wax; the penicillin being thoroughly dispersed in the clear, warmed beeswax-peanut oil mixture.

Romansky found that single injections of penicillin in beeswax-peanut oil mixture will maintain levels of penicillin in the blood for seven or more hours, as against two hours for penicillin in saline. These mixtures have maintained their potency at room, incubator and refrigerator temperatures for 30 to 62 days and showed no signs of deterioration at the time the report was prepared. Of significance from the standpoints of therapeutic efficiency and convenience to the patient was the fact that eleven of twelve patients with gonorrhea have been cured by a single injection of penicillin beeswax-peanut oil mixture. A supplemental note states that an additional 53 cases have since been cured.

Sulfathiazole Insufflation for Colds

In studies on the local use of powdered sulfathiazole in acute nasopharyngitis (common cold), H. C. Ballenger (*Quart. Bull. Northwestern Med. School* 18:109, 1944) reports that the nasal cavities of 500 patients suffering from colds were sprayed with a 2 per cent ephedrine hydrochloride solution and then powdered sulfathiazole was blown in until the nasal passages were covered with a dry white film. It was found that the duration of the colds was shorter than average after this treatment. In addition, there were fewer complications than in colds without this treatment.

Diet for Blood Pressure

Considerable attention is being drawn to the report of a new diet that appears to help patients with high blood pressure and kidney disease. The diet as reported by W. Kempner at the Chicago Meeting of the A.M.A. (through *Science* Suppl., June 23, 1944) consists solely of rice, fruit juices, sugar, vitamins and iron. It is Kempner's theory that one of the kidney's functions, that of deaminating the protein amino acids, is disturbed by lowered oxygen supply and the result is high blood pressure. The rice diet was developed to reduce the amount of protein handled by the kidneys, thereby lowering the amount of harmful substances which are believed responsible for the elevated blood pressure. Though no ill effects from the diet have been seen, not all patients show benefit. About 60 per cent of the patients placed on this diet showed reduced blood pressures.

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COD LIVER OIL OUTLOOK

Spot stocks of Cod Liver Oil are not too plentiful, and the world supply for the near future gives cause for some concern. If, however, the end of the European war comes shortly, the picture may change materially, as Norway may then be in position to take advantage of the producing possibility of normal winter fishing. Many intangible factors prevail today.

We feel certain, however, that our own stocks will always be adequate to care for normal needs, but for your own safety, we believe it is in your interest to discuss with us your needs, particularly as applying to the next six months.

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Compounder's Corner

New Cold Cream Base

Of interest to cosmetic manufacturers is the recent announcement by the Heyden Chemical Corporation, New York City of the development of a new base for cold creams. This new compound which is introduced under the name Pentamull 126-S is a derivative of pentaerythritol. Pentamull 126-S is supplied as a semi-solid, amber colored jelly. The following formula serves to illustrate the way in which it is possible to use Pentamull 126-S in recognized cold cream formulations:

Pentamull 126-S	**10 parts**
Ceresin	**20 parts**
Petrolatum	**20 parts**
Mineral oil	**80 parts**
Water	**70 parts**

The fatty components are melted together on a steam bath and then cooled to 55° C. The water, which is at 57° C., is then added and the mixture cooled to 45° C. and homogenized. The resulting products is said to be a cold cream of excellent quality with a smooth and pleasant texture. It is also possible to make absorption base cold creams using Pentamull 126-S to replace the now critical lanolin.

Prevention and Treatment of Sunburn

Sunburn, remarks L. Schwartz of the U. S. Public Health Service (Am. J. Nursing *44:640, 1944*), *is most prevalent in the laste spring, summer and early autumn, but it also occurs in winter in certain sections of the country where winter sports are popular and where there is high elevation and bright sunshine. He points out that the best method of developing a tan without burning is gradual exposure to the sun. Blondes and others who know that they cannot tan in this manner, or who wish to be out in the sun without burning, may do so by the application of chemical and physical light screens.*

The chemical light screens prevent the passage of most of the burning rays (2,900-3,200 A), but permit the passage of the tanning rays (3,300-4,000 A). There are many such chemical light screens available; many of them sold under trade names. Their effectiveness as screens for the burning rays varies from ten minutes for the poor ones to four hours for the best one. Quinine, salol, and tannic acid have long been known as chemical light screens but are now seldom used. Among the newer ones are menthyl salicylate, menthyl anthranilate, butyl benzal acetone ozalate, b-methyl umbelliferone, isobutyl para amino benzoate, benzyl anthranilate, and esculetin. The vegetable oils used with the chemical sun screens also have considerable screening properties; chief among them are sesame, cottonseed, and cocoanut oil. Mineral oil is usually mixed with these vegetable oils.

Below are formulas suggested by Schwartz for suntan applications:

Suntan Oil

Menthyl salicylate	**10.0**
Sesame oil	**45.0**
White mineral oil	**44.0**
Hydroquinone	**0.2**
Perfume	**1.0**

Suntan Cream

Menthyl anthranilate	**5.0**
Sesame oil	**15.0**
Cholesterol	**2.0**
Cold cream	**39.0**
Vanishing cream	**39.0**

Suntan Lotion

Butyl benzal acetone oxalate	**2.0**
Sesame oil	**10.0**
Tannic acid	**1.0**
Alcohol ethyl	**86.0**
Perfume	**1.0**
Hydroquinone	**0.2**

The physical light screens block the passage of all light rays and, therefore, prevent both sunburn and tanning. A cream or makeup containing 15-20 per cent of zinc oxide, or titanium oxide, or calamine, will protect the skin from all sunlight. Those who suffer from constitutional or skin disorders in the treatment of which sunlight is contraindicated, should use physical light screens on the affected and exposed parts of the body.

When sunburn occurs, the trea'ment depends on its severity. Mild cases with a simple erythema may use a simple drying powder consisting of equal parts of zinc oxide, boric acid, and talcum. In cases of moderate severity where there is some edema, wet dressings of a solution of aluminum acetate 1-500 may relieve discomfort. After swelling subsides, wet dressings may be replaced with soothing creams such as:

Benzocain	**2**
Methyl salicylate	**10**
Cold cream	**88**

In severe cases the blisters and bullae should be opened antiseptically and wet dressings of cold aluminum acetate 1-500, or saturated cold solution of boric acid applied. After the oozing ceases the soothing cream may be applied. Compresses of cold white mineral oil will give more relief in some cases than wet dressings.

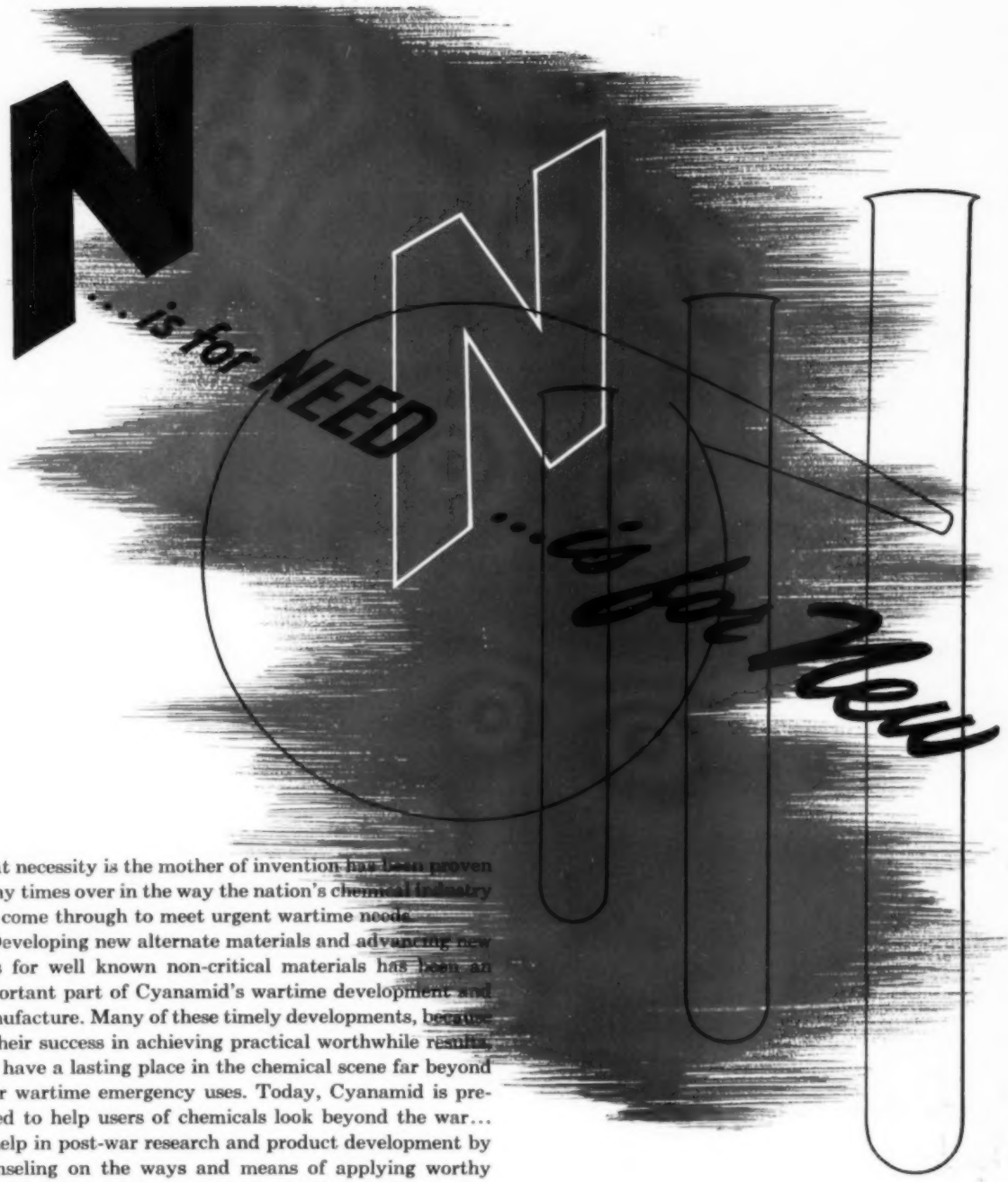
Epidermophytosis Preparation

An improved solution based on the action of salicylic acid for treating epidermophytosis (e.g. "Athlete's foot and related conditions) was recently described by W. B. Albert and R. F. Zeigler (*Southern Med. J.* 37:348, 1944). It is made as follows; the components being mixed in the order given:

Salicylic acid	**10.0 Gm.**
Acetone	**33.0 cc.**
Ethyl alcohol (85%)	**33.0 cc.**
Glycerine	**33.0 cc.**

The solution keeps well in screw-capped bottles. the fluid is applied by freely swabbing the infected area, using it more vigorously where foot infections are concerned, for two or three minutes and then allowing about five minutes for drying.

Tested on about fifty cases, this new preparation gave uniformly successful results. Relief from itching was prompt. More than half the patients were completely healed after one application and all responded after two or three applications at five to seven-day intervals. No blistering or peeling of the skin followed treatment, nor did any of the patients suffer any appreciable discomfort



That necessity is the mother of invention has been proven many times over in the way the nation's chemical industry has come through to meet urgent wartime needs.

Developing new alternate materials and advancing new uses for well known non-critical materials has been an important part of Cyanamid's wartime development and manufacture. Many of these timely developments, because of their success in achieving practical worthwhile results, will have a lasting place in the chemical scene far beyond their wartime emergency uses. Today, Cyanamid is prepared to help users of chemicals look beyond the war... to help in post-war research and product development by counseling on the ways and means of applying worthy materials, both new and old, to the solution of post-war product plans.

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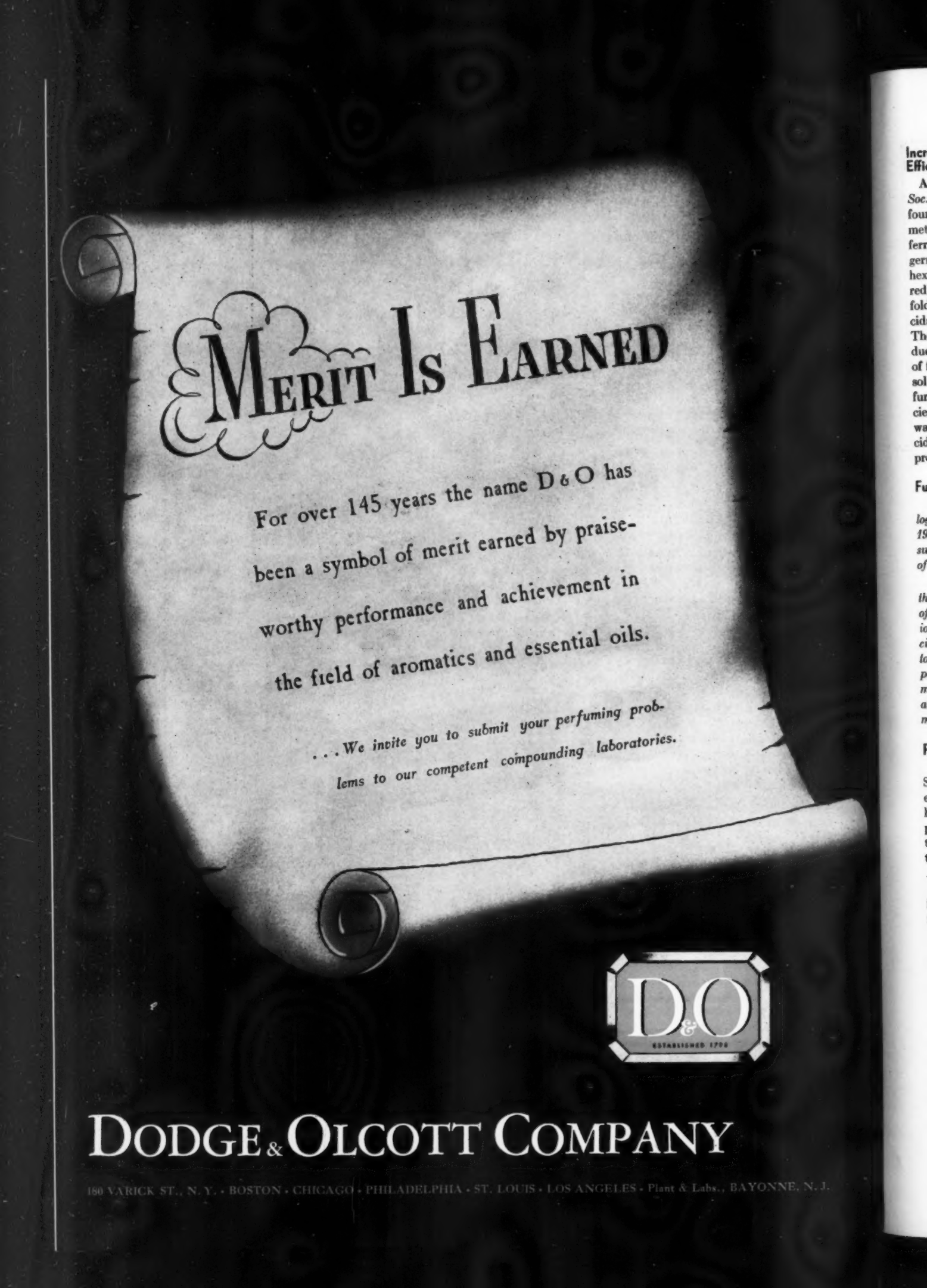
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Increasing Phenolic Germicide Efficiency

A. J. Salle and H. L. Guest (*Proc. Soc. Exper. Biol. & Med.* 55:26, 1944) found that the addition of certain metallic salts such as ferric chloride or ferric sulfate to solutions of phenolic germicides such as phenol, cresol and hexylresorcinol to produce oxidation-reduction systems resulted in a fifteen-fold or greater increase in their germicidal action on *Staphylococcus aureus*. The addition of another oxidation-reduction system composed of a mixture of ferric chloride and ferrous chloride to solutions of phenol and cresol still further increased the germicidal efficiency. However, maximum efficiency was obtained only if the salts and germicides were mixed in certain definite proportions.

Fungicide List Addition

Received after his article "Pharmacological Fungicides," (D. & C. I. Aug. 1944, p. 168 had gone to press, E. DiCyan suggests that iodine be included in the list of active agents, as follows:

Iodine 1%-7%. Employed either in the 7% hydro-alcoholic solution as tincture of iodine or the 2% as mild tincture of iodine; also as an addition to other fungicidal mixtures containing alcohol or acetone; never used pure or as an addition to powders because of the difficulty of intimate distribution; occasionally used as an addition to ointments. Use: In nearly all mycoses, often on an empirical basis.

Plant Hormone Aerosols

As a result of the work of H. A. Schomer and C. Hammer, the principle employed in aerosols against air-borne bacteria and insects is now being applied for spraying plant hormones so as to cause more rapid, better growth and to secure other desired plant properties. According to the *Farm Chemurgic* (3:63, 1944), applying a hormone to blossoms is not a new means of obtaining a set of fruit. This has been done by treating individual flowers. However, the new aerosol application promises a method that is economical on a large scale. In the experiments, made with tomatoes, 3 grams of the hormone (naphthoxy-acetic acid) were dissolved in 27 grams of a solvent, cyclohexanone, and this solution put into the cylinder or "bomb" under pressure, with 270 grams of di-methyl ether, which blows off with such force when the valve is opened that the particles of dispersed hormone are so fine as to resemble the finest pollen grains.

Viscosities of Pectin Solutions

After extensive studies of the viscosities of pectin solutions, published in the *Journal of the American Chemical Society* (66:1178, 1944), H. S. Owens, H. Lotzkar, R. C. Merrill and M. Peterson, all of the Western Regional Research Laboratory, report that the relative viscosity of pectin solutions varies with concentration in a manner similar to that of other ionizable hydrophilic colloids and certain salts.

They also found that the viscosity of dilute pectin solutions increases to a maximum as the *p*H is adjusted to a value near 6. The viscosity can be reduced to a minimum value by the addition of acid or sodium chloride. As the concentration of pectin is increased above 0.5%, the relative viscosity is practically unaffected by changes in *p*H in the range of 1 to 7. Urea up to 0.5 molal concentration has little effect on the relative viscosity of pectin solutions. Changing the temperature from 0.50° has little influence on the relative viscosity of pectin solutions at concentrations below 0.05%. Above that concentration the relative viscosity decreases with increase in temperature.

New Insect Repellent

U. S. Patent 2,356,801 covers a method for producing an insect repellent composition, said to be effective for as long as six hours, containing as an essential active ingredient a ternary solution comprising by volume from 33 1/3 per cent to 80 per cent of dimethyl phthalate, and complementary equal parts of 2-ethyl-1, 3-hexanediol and n-butyl mesityl oxide oxalate.

Developed by B. V. Travis and H. A. Jones, the patent covering the repellent has been assigned to the United States of America as represented by the Secretary of Agriculture. Manufacturers who are interested in marketing such a product should communicate with the Department of Agriculture regarding licenses.

Solid Soap Dentifrice

Tooth soaps or solid, cake type dentifrices do not appear to have much demand in the United States but seem to be fairly popular abroad. According to J. M. Vallance (*S.P.C.* 17:496, 1944) the soap base used for the production of such articles should be as tasteless as possible, and should not be free lathering. Ordinary soap bases are not suited to the purpose, as they are usually made with the object of producing a creamy or copious lather, which is not at all pleasant in a tooth soap. A soap made from cocoa butter is, if neutral, practically tasteless but too hard for the purpose of incorporating 75 per cent or so of chalk or other ingredients. A more suitable material is highly refined lard, free from salt.

A suitable combination for a general purposes tooth soap may be made up as follows:

Special lard soap base	**25 per cent**
Precipitated chalk	**70 per cent**
Talc	**5 per cent**

Flavor for the above is as follows:

Peppermint oil	**8 oz.**
Aniseed oil	**3 oz.**
Coumarin	**1 oz.**
Lavender M.B.	**1 oz.**
Clove oil	**3 oz.**
Saccharin	**2 oz.**

The flavoring is added during the milling process, as is also any coloring.

Variations of the above may be made by using different grades of chalk and other materials. Orris root in powder form may be included, also heavy magnesium carbonate and tin oxide. Among the more novel materials that could be experimentally incorporated in such cakes are sulfonated castor oil, sulfated fatty alcohols, methyl cellulose, sodium hexametaphosphate, sodium perborate. Fruitaceous flavors could also be tried.

Exothermic Composition for Hair Waving

Elimination of the metallic constituents of exothermic compositions used in machineless permanent waving forms the basis of U. S. Patent 2,350,926, granted to R. E. Reed. According to the patent specifications, there is provided an exothermic composition consisting essentially of a dry, stable mixture of a relatively non-volatile, oxidizable organic compound and a strong inorganic oxidizing agent. Activation with water or other activating agent results in the generation of sufficient heat for hair waving purposes. To make a suitable product, a permeable envelope of conventional structure may be filled with 6 Gm. of a mixture such as the following:

Mannitol, crystallized	**15 per cent**
Potassium permanganate	**45 per cent**
Talc	**40 per cent**

In certain cases sucrose or dextrose or both can be added to such compositions, mainly for the purpose of extending the duration of the reaction.

At the time of use a suitable absorbent sheet may be moistened with about 4 cc. of water and applied to the pervious envelope; the assembly then being draped and clamped around a pre-formed tress.

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STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

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PURCHASING DEPARTMENT

Government Glycerin Requirements Bolster Market; Indications of Speculation Maneuvers in Menthol

The fine chemical market was without important price feature during the current trading period. Of particular interest was the conflicting reports regarding Brazilian production and domestic consumption of menthol. There was a further shifting of prices on high gravity and yellow distilled glycerin. Chemically pure glycerin of both USP and BP specifications was left unchanged, as also was dynamite glycerin.

The Army's glycerin inquiry has developed into an actual order on the West Coast, and while the tonnage has not yet been revealed, it is quite possible the purchase may have included the million pounds that was to have been purchased on the Eastern seaboard, thus making a total of two million pounds. This material, it is believed, is earmarked for Lend-Lease shipment and will probably go to Russia.

It is recalled that earlier in September a Lend-Lease order had been placed for 1,600,000 pounds for September–October delivery. The Lend-Lease business, while running into a considerable tonnage, is not likely to affect the overall picture since there are ample quantities on hand to take care of all requirements. It is understood that Commodity Credit Corporation stocks are being substantially reduced, however, and in some quarters it is believed that an early victory in Europe will open up a tremendous export demand for use in liberated countries.

Menthol Confused

In the light of the acute shortage of menthol in this market only a few months ago, and the approach of the heavy consuming season, it does not seem possible there could be any spot lots pressing for sale here. Numerous predictions have been heard regarding the size of the next crop in Brazil with most forecasts giving assurance that a much larger output can be expected. The new crop, however, cannot be expected to arrive here much before early March and since the total production is entirely dependent upon weather conditions during the mint growing season, it is extremely difficult to give a clear picture of the future.

Some interests in Brazil are offering new crop at the maximum price, but buyers realizing that they could not obtain any immediate relief out of new crop purchases and in view of a general feeling of uncertainty that exists little or no future trade is reported. In the light of the bearish reports about the trade it would seem that every effort is being made to force prices down.

Alcohol Quotas

A 25% increase in their present quotas of alcohol will be granted manufacturers of pharmaceuticals, mouth washes and cosmetics for the final quarter of this year, beginning October 1, an authoritative War Production Board source said.

Present quotas are based on the fiscal year ending June 1942. Pharmaceutical manufacturers are now allowed 100% of this base period use, mouth wash manufacturers, 60% and cosmetic manufacturers 50%. The increase will provide quotas of 125%, 75% and 62½%, respectively.

Mercury Demand Limited

Major buyers of mercury seem content to await future developments before making commitments. Pacific Coast mines have very little metal that is not earmarked for consumption but some Mexican metal is said to be hanging over the market. Italian mercury mines which have been liberated by United Nations forces remained shut down, and stocks in Italy are reported to be surprisingly small. Under present circumstances it is not believed that there will be any Spanish or Italian metal available for shipment to the United States for some time to come. However, a possible change in the picture is probably one of the major reasons for the general feeling of caution that exists in local circles.

Agar Collection

Agar resources of the Atlantic coast are proving abundant for over 60,000 pounds was produced during the season last year. The region from Beaufort to Atlantic, N. C., seems to be the most valuable yet discovered of the entire Atlantic coast. Around 3,000,000 pounds were gathered between August 1, 1943,

(*Continued on page 481*)

SEPTEMBER PRICE CHANGES

UP

Cananga oil Native 50c
Rectified 25c
Cinnamic alcohol 50c
Cinnamic aldehyde 70c
Citronella oil Ceylon 5c
Clove oil 15c
Ergot 10c
Saffron Spanish $5
Senega root 15c
Vanilla beans Bourbon $1
Mex. cuts $2.25
Mex. whole $1.25

DOWN

Arnica flowers 70c
Cascara Sagrada 1c
Chamomile flowers Hung. 7c
Dill weed oil 35c
Rhubarb root HD 10c
Safrol 27c
Senna Tinnevelly 2c

• Prices quoted in this section were current on the first of this month.

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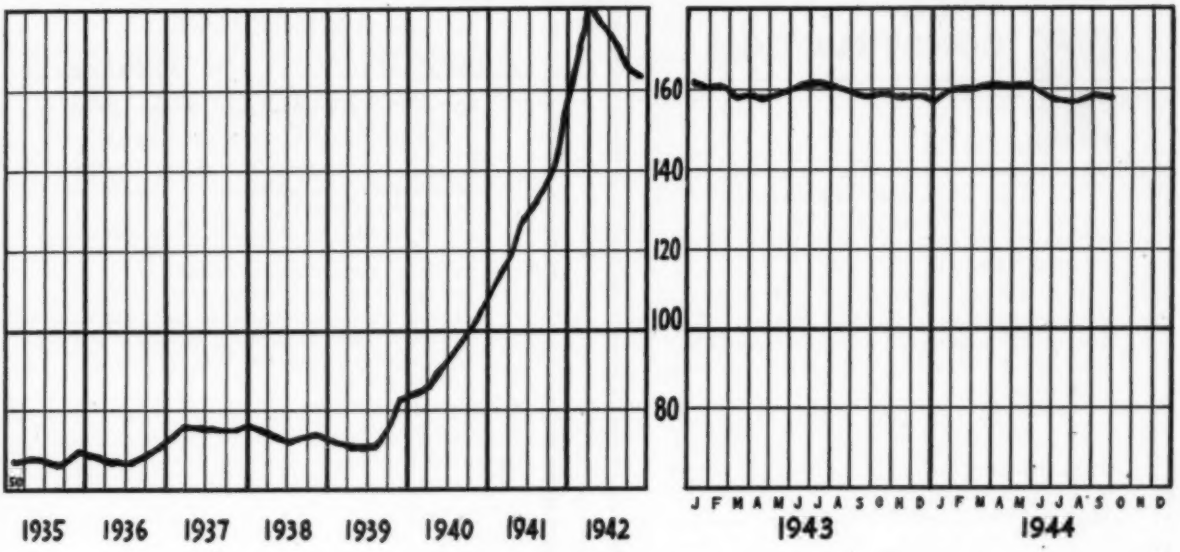
50 Raw Materials—Weighted Price Index 1926=100.



The price index of fifty commodities for September declined fractionally from 156.6 to 156.5.

Loss of Vanilla Beans Blow to Trade; Replacements from Madagascar Uncertain

The feature of the botanical drug market during the current trading period was the loss at sea of 110 tons of Bourbon vanilla beans and the consequent disruption of the spot market. About 75 per cent of the cargo had been sold and its replacement, if at all possible, is bound to be slow. The goods left Madagascar months ago, were transhipped at a foreign port, and now lie at the bottom of the ocean.

Informed of the difficult position prevailing in the local market as the result of this loss, it is believed authorities in Washington will make every effort to get replacements moving out of the primary center. But the supply of vanilla beans in Madagascar is not as large as local houses believed and, as a result, duplicate orders for prime quality beans have been turned down. Prime quality beans from the new crop will not be available until December, it is explained.

The effect of this loss on the price of spot vanilla was naturally strong. Some dealers were disposed to quote prices at the ceiling, while others would quote only on a replacement basis figured on the basis of Bourbon bean costs. Little material of any sort was in the open market, holders of the small stocks in dealers' hand being disposed to take a position of great reserve.

It will be difficult to turn to Mexico as a source from which to get beans to apply on the forward delivery contracts involving the lost Bourbon beans, as no surplus of Mexican beans exists. While Mexican production amounted to approximately 350,000 pounds it is understood that only about 50,000 pounds remain from the last crop and that most of these goods have been sold.

As about 80 tons of vanilla beans were exported from Tahiti, Society Islands, French Oceania, in the first half of 1944, total exports this year probably will be better than previously expected.

The market price for vanilla beans increased during the second quarter of 1944, making the price paid to exporters more favorable.

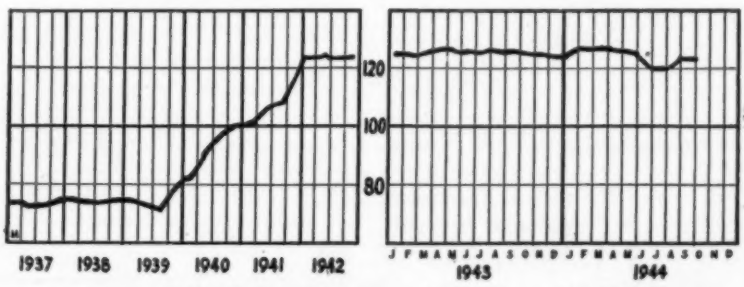
Currently the spot market price of the principal grades of vanilla beans are as follows: Bourbon from $10 to $10.50 a pound; Mexican cuts from $10 to $11; and Mexican whole beans from $11 to $11.25.

Caraway Seed Grown Here

Caraway seed is now being grown in this country as a result of the war. United States Department of Agriculture specialists report both the biennial and the annual types as being produced. In California there are 300 acres of the annual growing this year. Plans are to harvest it with combines. Oregon has small acreage of each type and Idaho some of the biennial. This is the first time there has been commercial production of caraway seed in the United States.

(*Continued on page 481*)

15 Medicinal Chemicals—Weighted Price Index 1926=100.



The medicinal chemicals index remained unchanged at 127.3.

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FINE CHEMICALS

(*Continued from page 477*)

and January 1, 1944. Most of this seaweed was gathered from a shallow bay of 500 to 600 acres. This type of alga (Gracilaria confervoides) not only occurs in great masses in shallow water, but also drifts around the ocean in loose pieces which may increase ten times in weight within two weeks. These are collected commercially by shrimp trawlers.

Lanolin Confused

The lanolin situation continues to be somewhat confusing in the face of latest reports from Washington indicating a tightening in allocations, especially since current quotations are at least several cents per pound below those in force about a month ago.

Increased military demands arising directly out of the successful prosecution of the European phase of the war have made it impossible to allocate any lanolin for cosmetic use for September/October. It is still an open question whether any can be allocated for November/December. Cosmetic manufacturers have been allocated about 150,000 pounds for each two-month period beginning April/May.

Camphor Tight

The exceedingly heavy war demand for technical synthetic camphor is continuing to have a decided influence upon the output of refined material and distributors are falling behind on deliveries of powdered material. Tablet deliveries have been running considerably behind for some time now but the situation in USP powder is becoming increasingly difficult.

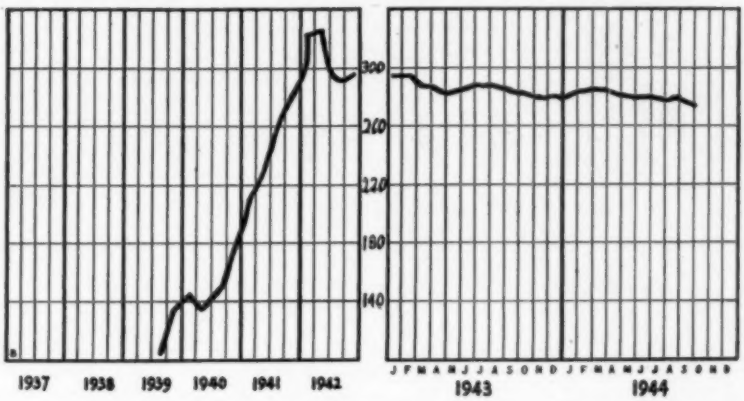
Fish Liver Sales

Sales of fish liver and viscera in British Columbia, Canada, in 1943 amounted to approximately 6,600,000 pounds and, with the oil produced from them, were worth $2,807,000 (Canadian currency), states the Canadian press. Ten years ago total sales were 280,000 pounds, valued at less than $56,000.

This tremendous expansion has been due to the increased knowledge of the vitamin content of fish livers. In 1943, liver oils produced in British Columbia totaled at least 4,000,000 pounds with a market value of more than $2,700,000.

In 1933, the livers of only four fish, halibut, ling cod, black cod, and red cod, were marketed in British Columbia. In 1943 there were added to the list livers from dogfish, gray cod, soup-fin sharks, mud sharks, ratfish, skates, salmon, and a few bass. During this same year, the catches consisted predominantly of dogfish, which had formerly been regarded as worthless, and more than 5,100,000 pounds of dogfish livers were sold at a total value of about $1,345,000. The oil produced from them was sold for almost $2,030,000. Other principal suppliers of livers were mud sharks, halibut, and ling cod.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined to 274.7 from the previous 277.5. Cascara was lower at 30 cents, rhubarb declined to 75 cents and senna dropped to 10 cents. Ergot was higher at $1.50.

CRUDE DRUGS

(*Continued from page 479*)

Cloves Lost

A cargo of Madagascar spice afloat to this market is reported lost at sea. This was part of the cargo of the ship loaded with vanilla beans recently reported as having sunk. The market has tightened all around.

Zanzibar is the principal source of the world's supply of cloves. Before the war, Zanzibar exported about half of its production of cloves to Java to be used in the making of clove cigarettes. This market was lost when the Japanese invaded the Netherlands East Indies, but supplies formerly sent to Java have been diverted to other countries.

In the 5 year period, 1939-43, average annual exports were well above the normal 10,000 tons. In 1941-42 exports achieved a record of 16,491 tons, as a bumper crop of 18,500 tons was produced, the second largest in the history of the country.

Cascara Down

The spot market was slightly lower at 30c to 31c per pound but not all dealers were willing to acknowledge an easier market. The absence of normal collection or reserve in the primary market will most likely limit any easing tendency that might develop because of an inactive spot market.

The annual value of cascara bark harvested in British Columbia, Canada, has reportedly reached $150,000, according to the Canadian press.

Nux-Vomica Exports

Exports of nux vomica from the Calcutta region in India were larger in the first half of 1944 than during the second half of 1943. Stocks at the port of Calcutta at the end of June amounted to 65 tons and those in the producing localities in Orissa were reported to be between 300 and 400 tons. The new crop will be ready for market in December 1944.

Chamomile Flowers Easier

Recent arrivals of Hungarian type chamomile flowers from South America had a softening effect on the spot market. Goods were offered quite freely at prices which ranged from 43c to 48c per pound. The fact that Argentina is in poor standing with the United States government operates against continued export of chamomile grown in that country and imported here. According to reports, Argentine funds were frozen by official order a short time back, which makes commercial intercourse highly difficult since there would be no way in which to pay for purchases there when such an order was issued.

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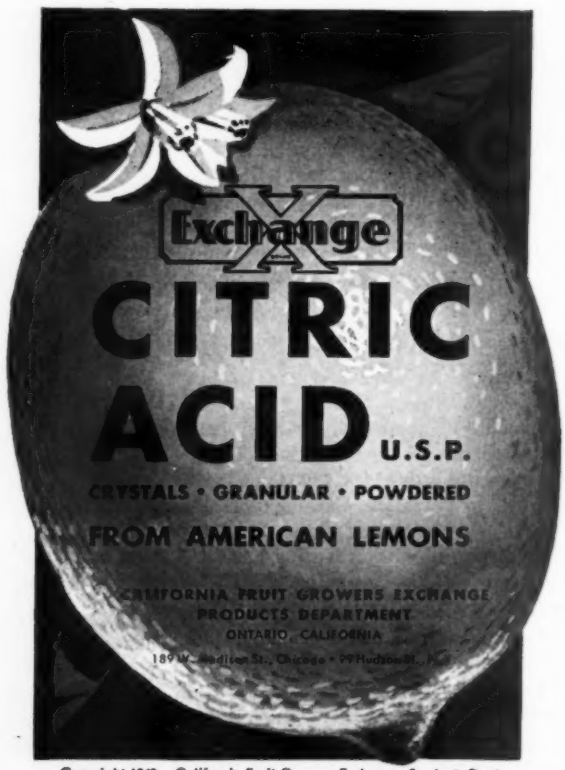

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Miscellaneous

Botanicals that come from Spain display considerable strength. Saffron is well sold up on spot with $52 a pound being asked. Ergot has moved up 10c a pound to $1.50. Replacements from that country seem highly uncertain. Because of a quiet market some holders of gum tragacanth appear willing to shade prices in order to reduce stocks. Elm bark is in a tight position. Colombo root is scarce on spot. Approximately 1,306 bags of rhubarb root arrived recently from India. Current quotations on goldenseal root are largely nominal because of limited supplies. Spot supply of valerian has been improved somewhat by the recent arrival of 117 bags. Dealers are asking full prices for Tinnevelly senna. Recent arrivals of additional lots of gum arabic have served to have an easier influence upon the general tone.

ESSENTIAL OILS

The approach of the end of the war in Europe seems already to be having an effect on the spot market for essential oils. This is not to imply that stocks are more plentiful, that the replacement position has materially improved, or that prices have softened. Rather, it has been definitely noted that demand has eased off to a point where it is logical to assume that manufacturing consumers are using their high priced inventories in expectation of replacing them at lower levels later on.

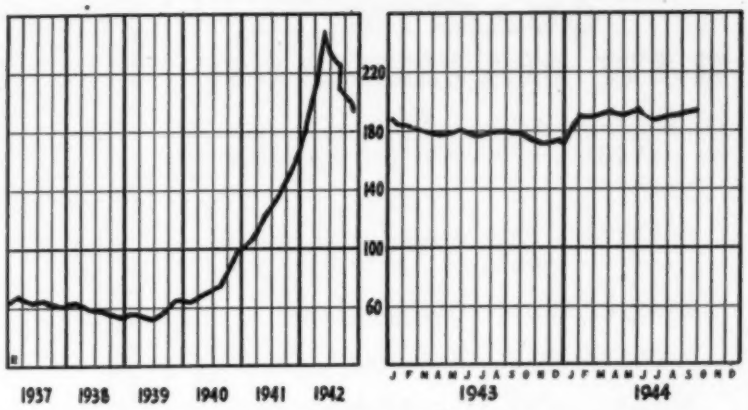
A renewed interest was noted in the mint oil. Growers were again considering approaching OPA for an upward revision in price schedules. Agitation was caused in the market by the loss at sea of 107 drums of clove oil, 73 drums of Bourbon geranium oil, 36 drums of Bourbon vetiver oil, and 9 drums of ylang ylang oil. All these oils are in a very firm position because spot stocks are either very small or non-existent.

Citronella Firmer

Ceylon citronella oil has turned decidedly firmer here as a result of more active trading between dealers. Over a ton changed hands at 95c per pound, recently. The activity was said to be due to a report that fairly good quantities of oil are being purchased in the primary market center for the United Kingdom.

Citronella-oil exports from Ceylon declined sharply in the second half of 1943. Previously, it was estimated that production of this oil in 1944 would total between 11,000 and 13,000 hundredweight, but because of declining prices, the actual output will probably not exceed 11,000 hundredweight.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced to 176.2 from the previous 174.9. Cananga was up to $12, citronella Ceylon advanced to 95 cents, and clove oil to $1.75.

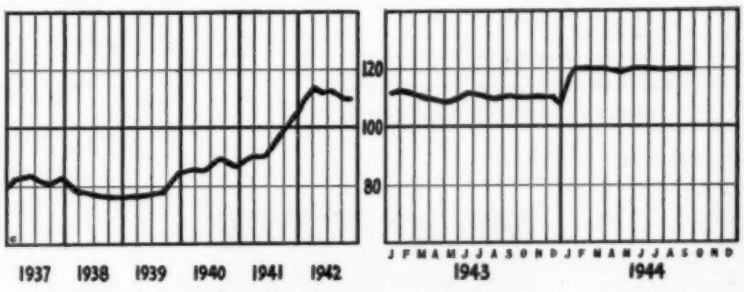
Miscellaneous

Current quotations on East Indian sandalwood oil are largely nominal because of absence of spot stocks. Some houses state they have been able to obtain small lots of spruce oil in the country and are offering at $2.65 a pound but that hemlock is virtually unobtainable. Safrol is easier because of increasing supplies of raw material. New crop influence has softened the market in dill weed oil. During the last few weeks quotations for future shipments of lemongrass have continued to edge upward. Oil of cedarwood continues to be very difficult to obtain. The most severe decline of recent weeks was recorded in artificial sassafras oil, with quotations dropping some forty per cent in a short period of time. The situation in petitgrain has eased up a bit. The short supply in eucalyptus oil is unlikely to be relieved very soon. Dealers are unable to obtain goods in the Australian market in needed quantities and the South American sources aid only to a limited extent. Stocks of geranium are very low and not likely to be replenished very soon. Very little vetiver is available on spot and sellers expect it will be months before further supplies of Bourbon oil will be started toward this country. No general distillation of oil of tansy is looked for. Odd lots may be produced here and there, but no general stocking on this market seems likely.

With improved conditions in the cinnamon-leaf oil industry, exports for the first half of 1944 were considerably above those for the corresponding period of 1943.

Exports of cinnamon-bark oil in the first 6 months of 1944 increased, compared to the amount shipped during the corresponding period in 1943. However, the cinnamon-bark oil industry has never been of great importance in Ceylon.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index remained without change at 113.1.

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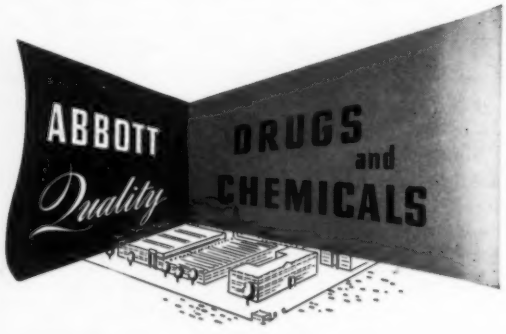

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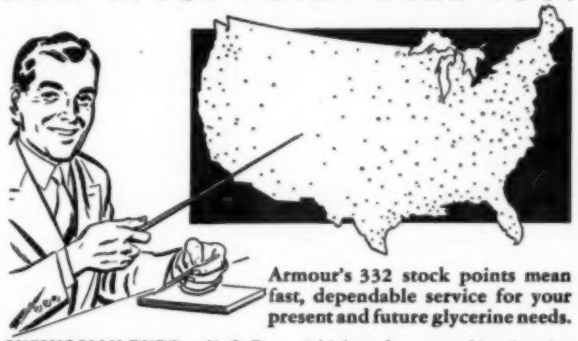

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Curare

(*Continued from page 415*)

that of absorption. This fact is further evident in the observation that the South American natives eat the meat of animals brought down by curare-poisoned arrows. Of course, any wound or lesion in the mouth or throat makes curare a dangerous substance to be taken orally[26]. Since curare is partially destroyed in the liver and the rest is excreted unchanged by the kidneys it is obvious that these organs must be in good condition for the safe administration of this drug.[22]

It is self-evident that a potent drug like curare requires careful standardization and because its exact chemical composition is not known, bio-assay becomes the sole means of control. Two methods have been worked out. The first, utilizing a frog gastrocuemius preparation, is applicable only when controlled by a reference standard qualitatively identical with the test material. Holaday's method, the so-called "head-drop" method in the rabbit, is the one used by the chief producer of therapeutic curare solutions in this country. In this procedure, the curare solution is slowly injected into the ear vein of the rabbit and the dose adjusted so that the neck muscles after two and one-half to three minutes reach a degree of flaccidity which just prevents the animal from raising its head. The end point is very clear cut and the typical curare effect occurs exactly as seen in the human after the injection of a curarizing dose. The amount per kilogram required to produce this effect in the rabbit is estimated and the dosage is figured according to the body weight of the patient.[3]

Although the modern medical uses of curare may be said to have really begun only a few years ago, in the past many attempts have been made to utilize the muscle-relaxing effects of this drug.[3] Addinall[27] has pointed out that under the stimulus of Claude Bernard's research a rather extensive effort was made in France to employ curare in therapeutics. It was tried in the treatment of hydrophobia, tetanus, epilepsy and also in chorea and seemed to have gained some recognition as a useful aid in desperate cases. It was tried, but on a smaller scale, in Germany. It is interesting that at the time of the Boer War, pellets containing curare were issued to the British forces for use in tetanus.

For about thirty years interest in curare remained dormant, probably because of lack of dependable curare preparations. Having noticed the rigidity-removing or "lassive" properties of curare in experimental work, West[5] undertook the application of the drug to diseases involving muscular rigidity in man. In 1936, he[28] reported interesting results with curare in the treatment of tetanus. In lockjaw, it must be realized, the characteristic violent muscular contractions become almost tetanic convulsions, finally exhausting the patient and eventuating in death. Theoretically, according to Bennett,[3] curare offers hope of preventing this exhaustion by relaxing the muscular

spasms until the patient can develop an immunity against the toxins of tetanus bacilli.

Last year, Cullen and Quinn[29] made use of curare for controlling muscle spasm in four patients with tetanus. Their results proved that repeated curare injections could control muscle spasm and permit the patient to move about in bed, void, defecate and breath freely. They warned, however, that the drug must be used cautiously.

Curare has found a rather well established place in the treatment of patients with certain mental disorders (e.g. manic-depressive psychosis, schizophrenia, etc.) to soften the convulsions of shock therapy by metrazol or electricity. For a time, it appeared that shock therapy, despite its obvious beneficial results in many cases, might have had to be abandoned not only because the convulsions associated with this form of therapy left the patient physically exhausted but, more serious, because of the frequent occurrence of traumatic complications such as fractures of the spine and of the arms and legs.

In 1940, Bennett[30] reported that he had developed a method of preliminary curarization prior to metrazol convulsive shock therapy which removed most of the traumatic hazards of this type of treatment. Soon other reports from other investigators[31, 32, 34, 35, 36] began to affirm the advantages accruing from preliminary curarization in treating these mental cases. It was found that curare did not interfere with the results obtained in clearing the mental ailments and, when used with due caution, was quite safe. Indeed, it was found that the use of curare for the purpose of protecting the patient from injury made such treatment applicable to patients who might not have been able to stand shock therapy alone. As electric shock therapy came into wider use, it was also found that preliminary curarization was quite advantageous.[33, 37]

Curare is finding an expanding utility in spastic and other hyperkinetic neuromuscular disorders. A few years ago, Burman[7, 38] obtained beneficial results in patients with spastic paralysis and others[5, 39] have since reported varying degrees of success in treating children with this disease with curare. In Burman's cases, as with others reported subsequently, it was found necessary to adjust the dosage to individual requirements. Although curare is excreted rapidly, he found that the beneficial effect usually lasted one or two days, sometimes longer; hence injections were given three times weekly. All the investigators agree that repeated therapy does not cause harmful effects and that tolerance does not develop. Benefits were noted in the improvement in spasm and plastic muscle rigidity. In addition, the response to muscle training and to the educational program was definitely accelerated.[39]

Burman also employed curare in several cases of dystonia muscularum deformans. He found that the injections caused a lessening of muscle tenseness and the spasms tended to return after longer intervals and with less intensity. Ability to perform simple tasks re-

(*Continued on page 488*)

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Hand Protective Creams

(*Continued from page 417*)

emulsion to break because it is prone to produce the water-in-oil type rather than the oil-in-water which vanishing creams are. Cetyl and stearyl alcohols may also be incorporated in small amounts since these alcohols have a tendency greatly to increase the stability of this class of cream.

From the standpoint of its protective properties the vanishing cream is similar in function to the hand lotion and serves somewhat the same purpose.

These creams have enjoyed a long period of popularity and undoubtedly will continue to keep it. However, there are now available or will be after hostilities have ceased a great many new materials which may cause some novel changes to take place. The sulfated swetting agents for example could replace the use of soap. The cationic type of wetting agents such as the quaternary ammonium salts may also be used. At this writing, however, it is difficult to say whether there will be any advantage offered since there are too many arguments pro and con and too little visual evidence to support a claim of superiority.

Curare

(*Continued from page 487*)

turned and sometimes bedridden patients were able to walk again.

Because of its ability to relax muscles and to reduce tremor and convulsive movements, attempts have been made to use the drug in other conditions marked by these symptoms. However, Bennett[3] found that while curare produced a temporary beneficial effect, its action was too transient to be of great value in such conditions as Parkinson's disease, paralysis agitans and Huntington's chorea. Epileptic convulsions may be treated with curare but this awaits study. Griffith[25] has mentioned that curare might be used for the control of eclamptic and other forms of convulsions in unconscious patients provided that oxygen and means of artificial respiration were always at hand.

Because it provides such good muscle relaxation, the newest indication for curarization is in the field of anesthesiology and surgery. Since curare has been employed for this purpose during only the last two years, it is obviously still in the preliminary stages of investigation. In 1942, Griffith and Johnson,[40] used the drug intravenously in patients under general anesthesia and found that it caused in less than a minute a dramatic and complete relaxation of the skeletal muscles. During the following year, Cullen's[41] work confirmed their findings, and pointed to the advantages of curare for improving abdominal muscle relaxation during inhalation anesthesia.

Other workers[22, 35, 43, 48] have since continued to report the advantages of securing better relaxation and

hence better surgical conditions through curare. However, they are all quite unanimous in their opinion that while curare appears to be a most valuable adjunct to anesthesiology, it should not be used indiscriminately and then only by an experienced anesthesiologist.

Curare has another important use, this one as a diagnostic acid for differentiating myasthenia gravis from other similar disorders. Injection of very small doses of curare in patients with this disease produce profound reactions since they are very sensitive to this drug and the response may be used to indicate the presence of the disorder. With prostigmine as an antidote the test is not as hazardous as might be expected."[44]

Because it is a dangerous drug, because it has a transient action, and because, as pointed out by Hatoff,[26] war-time restrictions cut off curare supplies just at the time interest was aroused, a search for substitutes with curare-like qualities was begun by many workers.[3, 12, 45, 46, 47, 48] While there are many substances with curare-like action many of them are unsuitable, for various pharmacological reasons.[3] At present chief interest appears to be centered around erythroidine and quinine methochloride. However, these compounds must await further evaluation.

From the foregoing it is quite evident that the arrow poison of the Amazon Indian has been tamed to yield a drug with many actual uses and many potential applications in saving lives and conquering diseases.

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Dentifrices

(Continued from page 413)

recent years greater emphasis upon health has been promoted through the induction of millions into the armed services, by the consequent shortages of labor and the necessity for greater man and woman power. Army life, scarcity of doctors, government and industrial health bulletins have all made the public more health conscious. Then too, as has already been indicated, people have more money to spend on themselves in these prosperous war periods. Dentists report that even though they are already overcrowded with work, persons who never gave the oral cavity any attention whatever, now have their teeth regularly attended to. In the armed forces where treatment are free and obligatory teeth that never had care before are now being regularly cared for in millions of cases. These conditions which are very favorable to the industry have given great impetus to the propaganda put out by dentifrice manufacturers for years that the care of the teeth is vital to good health.

It is very probable that claims made for tooth cleansing preparations will be weighed more carefully by users than in previous years. There is no denying the fact that the credulity of the populace rather than confirmable scientific assertions, has motivated advertising copy writers in the past. In the future the properties contributed to the product will need verification in the laboratory. Larger manufacturers of dentifrices already realize this and have established clinics and laboratories to verify the claims made in advertising copy and accompanying the packages. I was quite amazed recently upon visiting the plant of one of the largest tooth paste manufacturers, to observe the thoroughness and completeness of their research laboratories. Greater attention was paid to their products behind the scenes, so to speak, than upon the production lines. No claims were permitted until they were established upon a scientific basis. A decade ago such a venture would have been considered an extravagance, but today it is being proven that it pays dividends many times over. This is indeed a step in the right direction, which foretells improvement in future years. In these years when assertions are made for whitening of the teeth, prevention of dental caries, preservation of receding gums, aid in control of trench mouth, antisepsis of the oral cavity and similar claims of the past, they will be confirmable rather than vague imaginations of a scientifically untrained copy writer. There is ample field and opportunity for research in the dentifrices to verify such claims ethically. It is far better policy to cooperate with the dental profession and to be in accord with the current scientific opinion demanded by administrative offices than to try to get the jump upon competitors by stating false claims which can only result in being cracked down upon by vigilant administrative officials. This latter procedure when publicized by the press and certain consumer services, activated by ulteria motives not only

does the individual manufacturer great harm, but is detrimental to the entire industry. Fortunately the tendency is in the right direction. There still exist cases of citations for false and misleading claims in the dentifrice field.

The composition of dentifrices vary materially. It is therefore, not possible to cover thoroughly the entire field because in many cases formulae are closely guarded. The main purpose of any dentifrice is to cleanse and polish the teeth without wearing away the enamel or injuring the gum structure. This cleansing action may be obtained by compounding powders, pastes or liquids. There is considerable doubt as to whether the constant use of liquid is desirable because it is more apt to act as a lubricant to the brush, than as a mild abrasive so necessary to remove coatings that collect upon the surface of the teeth.

The ingredients are varied and the same ones are not used in all brands. They include abrasives, sweeteners, starch, (usually as glyceride of starch), glycerine, alcohol, propylene glycol, soap, wetting agents, water, gums, medicaments, preservatives, flavors, or aromatics and certain colors. The skill with which these various ingredients are compounded determines the type, quality, consistency and shelf life of the finished product. In considering the actual manufacturing operations for the various types of dentifrices, it is necessary to make certain observations regarding raw materials and their handling, and then to consider the actual modus operandi in compounding these to make the preparation.

(To be continued)

SACHET BASE: One of my clients is looking for an inert granular base for sachet perfumes and powders. I understand that sawdust has been suggested for this purpose. Is this true? Brooklyn.

Ground wood or specially prepared sawdust made from properly seasoned and selected woods, has been used in the preparation of sachet powders, and is available from producers in your neighborhood. However, it must be stressed that not all grades of sawdust are suitable for this purpose and that special grades must be used.

LIQUID STOCKINGS: We would like to ask you to be good enough to mail us formulas for the following: Stockingless make-up; liquid incense; and incense candles? Montreal.

There are many formulas for cosmetic stockings and all require a certain amount of experimentation to get best results. I would suggest that as a starter you try the following:

Liquid petrolatum	**1.0 part**
Glycerylmonostearate (containing trace of soap)	**6.0 parts**
Distilled water	**48.0 parts**
Glycerine	**15.0 parts**
Titanium dioxide plus earth pigments	**21.0 parts**
Talc	**9.0 parts**
Perfume	**sufficient**

With regard to liquid incense and incense candles, this is out of our line. I am sorry but I cannot be of any help in this direction.

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What it is

SORBOTEX 301 is a white, ointment-like odorless mixture of higher fatty alcohols and esters in a hydrocarbon base. It does not contain lanolin. It is free from any tendency to eventually discolor the products in which it is used or to impart an undesirable odor to them. Its water absorption is substantially greater than that of absorption base containing either lanolin or lanolin isolates.

What it does

SORBOTEX 301 makes white, stable water-in-oil emulsions. In the presence of an alkali, it is also a highly effective emulsifier and stabilizing agent for oil-in-water emulsions, an advantage offered by very few types of absorption base.

Uses

SORBOTEX 301 is applicable to night creams, cold creams, ointment bases, permanent wave preparations, etc. It can also be used as an extender for lanolin.

Suggested percentages: In water-in-oil emulsions, that is, creams having a high fat-content, such as night creams, for instance, up to 25 percent. In oil-in-water emulsions, that is, creams with a low oil-content, such as vanishing-type face and hand creams, up to 5 percent. In permanent wave preparations, up to 2 per cent.

Make this test

Make a small batch of one of your creams, replacing the absorption base that you are now using with Sorbotex 301. Compare the cream containing Sorbotex 301 with that made with your present absorption base, as to appearance, texture, emollient effect, and stability. We will gladly supply the Sorbotex 301 required to make the test, without charge.

SORBOTEX 301 is made of freely available raw material; it can therefore be supplied promptly in all quantities. Its price is attractive.

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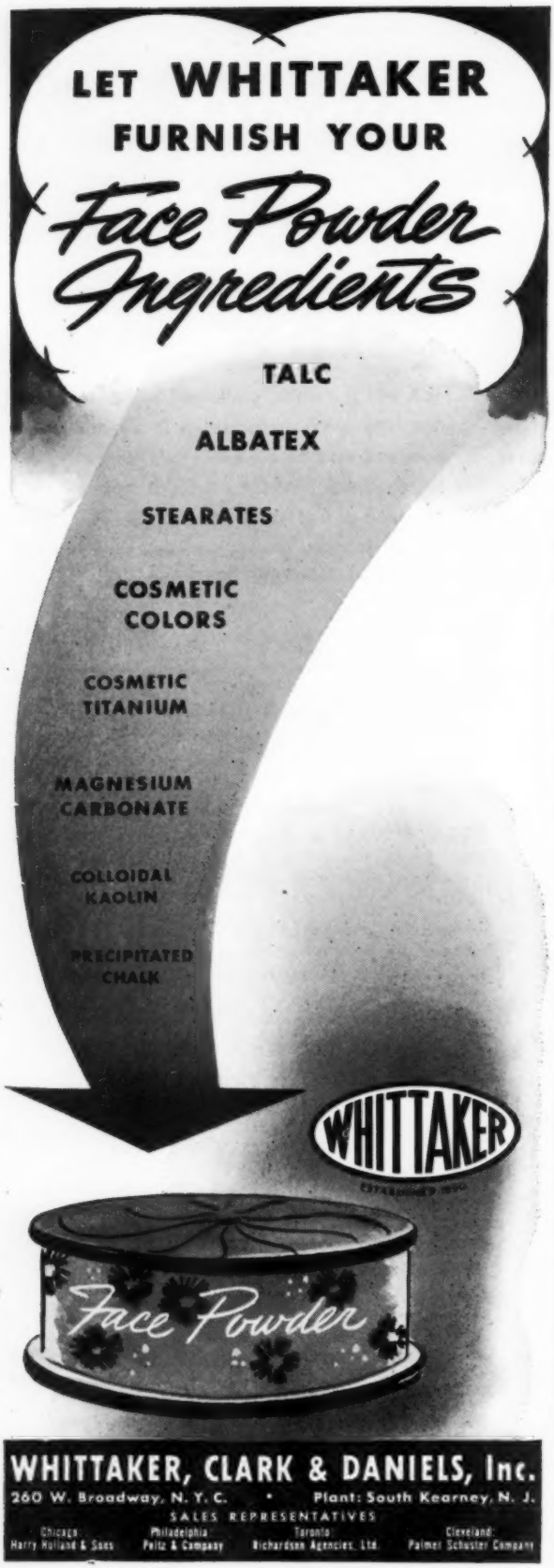

Reconversion

(*Continued from page 409*)

and inefficient factories as well, both in good and bad locations, it is obvious that the consolidation of these manufacturing organizations into the large manufacturing centers strategically located to service the principal market areas of the country makes possible the lowest conceivable operating cost and the highest degree of service to the trade. Such organizations could benefit more than anyone else because they can gain not only from sharing the common services such as power, warehousing, etc. but they also gain from a radical reduction in executive personnel. One good plant manager can run a dozen drug or cosmetic companies under one roof, whereas a dozen plant managers are required if the units are scattered. Since many of the holding corporations manufacture seasonal food products and household chemicals as well as cosmetics and pharmaceuticals, much would be gained through the stabilization of personnel, which would be under one roof, completely flexible and could be shifted from division to division within the plant as seasonal requirements influenced the demand for labor.

The smaller organizations are by no means to be left out of this picture. The government is very keenly interested in the welfare of the small organizations because individually they lack economic power and cannot fight for themselves as well as large organizations which can afford to employ the highest priced legal and technical talent and purchase whatever facilities they may require. All the signs point to post-war competition which will be as ruthless as it will be intense. The small organizations having a business of a quarter of a million dollars or less will have a tough time staying in business at a profit. Their problems will not be less complicated by increasing government supervision and regulation. The smaller firms, therefore, stand to benefit even more than the large ones by cooperation in the services that are common to all.

For a moment let us examine briefly what some of the very large plants have to offer. Generally speaking they are one story buildings with head room ranging from 20 to 50 feet. This makes possible one story operation which is ideal for pharmaceutical and cosmetic manufacture. At the same time, high head room permits tiering of manufacturing equipment, so that when necessary, effective gravity flow can be secured without a multiplicity of intervening floors. High headroom likewise permits the use of a pallet handling system making possible stacks of raw materials 15 or 20 feet high. As a rule in these war plants lighting is of the best, power and water are ample, almost without exception railroad siding facilities are more than ample. Some of the war plants indeed, are entirely air conditioned. Fortunately, most of these large plants, especially the aircraft plants are well located from an operating and market standpoint. They are located near Detroit, Chicago, Fort Worth, Los Angeles and New York. Almost without exception the war plants are located in

areas having a plentiful supply of female labor and finally they are certain to be sold for a song.

The abandonment of a nondescript collection of old and inefficient factory buildings of all sizes and types entails economies other than those in the cooperative sharing of transportation services, power, heat and other services. The greatest economy lies in the simplification of layout, the shortening and straightening of material flow lines, the elimination of material rehandling and in the improved supervision which is made possible by one story operation.

At first glance the idea of sleeping in the same bed with his competitors might seem repugnant to manufacturers of little vision. As a matter of fact, some of them already are engaged in cooperative practices such as the use of common distributing warehouses at various points in the country. They also are accustomed to undertaking joint investigations for the point of establishing or checking the standards of the U.S.P. and N.F. and moreover, as mentioned above, some of them have for years been located in the same industrial or loft buildings with their competitors.

Let us examine the procedure involved in organizing the joint operation of one of the war buildings. Through a government or trade agency contact would be made with a group of manufacturers interested in establishing a joint manufacturing enterprise. These manufacturers would together form an operating organization, each contributing to the organization an amount of capital proportionate to the share of the space in the plant that the individual enterprise will occupy. Each tenant would be a member of the board of directors of the operating company. By common consent, a general manager for the operating organization would be selected. The property would be acquired from the government by purchase or long time lease and the operating organization would then put the building into condition for occupancy by the several tenants. Common trucking, warehousing and shipping services would be established. These activities would be under the supervision of a competent traffic manager (a type of specialized executive whom the smaller organizations cannot individually afford to employ) and the traffic manager would handle incoming and outgoing freight at the lowest possible cost for all concerned. The economies achieved by being able to obtain carload rates of LCL shipment would be very substantial because cooperative warehousing would make possible the use pool or trap cars. Obviously the operation of a fleet of trucks by the operating organization also would achieve substantial economies. Moreover, the operation of a centralized warehouse would make available the use of the handling equipment which in some cases the individual tenants could not possibly afford. Materials stored in the centralized warehouse would be in unopened containers. All open stock would be stored in their own portion of the premises by the individual manufacturers involved.

As stated above great benefits would accrue from the establishment of a centralized control laboratory to ex-

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OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
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amine and certify all incoming raw materials for the several tenants. Research activities would be conducted in the tenant's individual laboratories. It is easy to see that cooperative action would make possible group purchase through a centralized purchasing office and all tenants would benefit from purchasing in larger volumes. There is nothing really new about group purchasing. The trade hasn't been in a position to adopt a practice which has been followed for years by large and small department stores all over the country. As to future expansion requirements of individual tenants, the fact that the war plants are as a rule one story structures, makes easily possible the addition of new construction as required to the tenant's individual portion of the building. Space in a large one story building, wholly devoid of columns as in the aircraft plants, is as fluid as water. Space unhampered by columns and almost unlimited head room is something a production engineer dreams about but seldom can afford to build.

Finally, in this picture, there is a tax angle which ought not to be ignored. Under certain circumstances the abandonment of obsolete plants is still possible and residual values can be written off. Moreover, moving and demolition expenses are deductible. Uncle Sam not only will make the buildings available at an infinitesimal fraction of reproduction cost, but also will, under existing tax laws, pay all moving expenses besides. It is also entirely possible that communities where the principal war plants are located would make special tax concessions to keep the plants in operation.

To sum up:—The best of the large war plants are suitable for manufacturing and warehousing purposes by drug and cosmetic firms operating either individually or jointly.

These buildings are ideal for pharmaceutical manufacturing and warehousing purposes because they are as a rule one story units with unusual head room and capable of lateral expansion in one or more directions.

Many of the war plants are located in areas accessible to the principal markets and to adequate labor supplies and all are equipped with excellent facilities for factory services, such as heat, light, power, water, rail and trucking.

The war plants are certain to be sold at a small fraction of the square foot cost of erecting new buildings.

Through the device of jointly owned operating companies the larger war plants can be jointly occupied by a multiplicity of small competing companies as well as large ones.

Joint occupancy of such buildings makes it possible to reduce overhead and handling costs to a degree that could not be matched by individual construction even of the most modern type.

Since factories exist only for the service of sales, these war plants generally are so located as to facilitate this service to the highest degree, and are constructed in a manner which makes their internal space completely fluid and easily adaptable for changing conditions, processes and products.

READERS' QUESTIONS

PERMANENT WAVE SOLUTION: Please send me a formula for a permanent wave solution. I have been making a solution with boraz, sodium bicarbonate, ammonia, etc., and it makes a good stretcher for the permanent wave solution, but I am unable to get a satisfactory curl from it. Danville.

I would suggest that you try the following permanent wave solution:

Morpholine	**6.0**
Potassium sulfite	**1.5**
Ammonium carbonate	**2.5**
Sulfonated castor oil	**1.0**
Water	**89.0**

Dissolve the first three in the water, add the oil and mix well.

LINIMENT: Can you give me information on the formulation of a mild but effective liniment for general purpose use? Toronto.

Formulas for liniments have frequently been published in our magazine. However, a quite effective liniment can be prepared from the following combination:

Camphor	**10 oz.**
Menthol	**4 oz.**
Thyme Oil	**4 oz.**
Sassafras Oil	**4 oz.**
Tincture of Myrrh	**6 oz.**
Tincture of Capsicum	**6 oz.**
Chloroform	**5 oz.**
Alcohol	**2-2½ pt.**

LIQUID LIP MAKE-UP: Recently, in one of the cosmetic magazines, I saw a formula for a paint (lips) stick but, because other things were pressing at the time, I did not make a note, mental or otherwise, exactly in which magazine it appeared, nor the month, nor the page. There is a hazy recollection in my mind that part of the formula was for mineral oil, stearic acid, and one or two other ingredients. Although I have looked through several of your issues recently, I am unable to find it in any one of them and I wonder whether you are in possession of such a formula and are able to give it to us. Philadelphia.

The only article recently in DRUG AND COSMETIC INDUSTRY was a review of lipstick formulation by Hilfer, in the June 1944 issue, page 651. I am not quite certain as to what you mean by a paint (lips) stick. I presume you are referring to liquid lip make-up. However, products of this type have been patented during the last year or so, the film-forming material being ethyl cellulose. From your letter, however, I assume that you mean you are interested in one of the older types of preparations such as might be prepared from the following:

Triethanolamine oleate	**15.0**
Glycerine	**10.0**
Water	**10.0**
Beeswax	**10.0**
Mineral oil, white	**40.0**
Color, oil-soluble	**2.5**
Perfume	**sufficient**

Heat the first three ingredients to 50-60° C. Heat the next three ingredients to the same temperature and add to the aqueous solution with stirring; stir until cold and add perfume.

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READERS'

HAND LOTION: I am particularly interested in a formula for a good hand lotion. Perhaps you have some suggestions. Gardner.

I believe that you will find that the following formula will give you a good hand lotion:

Glyceryl Monostearate	**3.5**
Oleic Acid	**2.5**
Glycerine	**5.0**
Alcohol	**5.0**
Triethanolamine	**1.0**
Water	**83.0**
Preservative and perfume	**sufficient**

ANTACID POWDER: Please send me a copy of a formula for a typical standard antacid powder. Cleveland.

The following is a standard and quite effective antacid preparation:

Magnesium trisillicate	**33 parts**
Tribasic magnesium phosphate	**33 parts**
Tribasic calcium phosphate	**34 parts**

The average dose of this preparation is one teaspoonful.

FACE POWDER MANUFACTURE: Will you please let us know of a formula for making face powder? It must be made from the best and purest of materials to give a light feather-weight product. The jobber who used to supply me has stopped making face powder for the duration. New York.

As you are probably aware, the manufacture of modern face powders is something of an art, employing as it does the blending of raw materials, perfume and color. I would suggest that you read up on the subject before undertaking the production of face powder on your own. I would recommend for this purpose that you consult either or both, Chilson's "Modern Cosmetics" and DeNavarre's "The Chemistry and Manufacture of Cosmetics."

Regarding the manufacture of face powder itself, it is common practice to divide this procedure into two steps. The first is the preparation of the white base containing the perfume. This is allowed to age to permit the perfume to penetrate thoroughly throughout the powder. The second phase is the preparation of powder color compositions, which are generally used in the proportion of about 4-8 parts of color base to 96-62 parts of white powder base. A typical white base for light powders made with zinc oxide is as follows:

Zinc oxide	**22.83 parts**
Talc	**67.63 parts**
Zinc stearate	**6.25 parts**
Precipitated chalk or magnesium carbonate	**2.25 parts**
Perfume	**1.04 parts**

Formulas for color bases are available but they cannot be reproduced here because of their length. For this purpose, I would suggest that you read Chilson's text on cosmetics. I would also suggest that you check the article on face powder production appearing on page 166 of the August, 1944 issue of DRUG & COSMETIC INDUSTRY

QUESTIONS

SKIN PROTECTIVE: We are interested in a skin protecting cream. A preparation that seems to be an alkaline soap is quite popular in our community. Could you give me a formula for making a cream of this type? Detroit.

A preparation of this type should not be too difficult to prepare. To make a skin protective containing soap, I would suggest that you start with the following formula, which has been recommended by public health workers:

Magnesium carbonate	**5.0 parts**
Talc	**5.0 parts**
Soap	**30.0 parts**
Hydrous wool fat	**30.0 parts**
Castor oil	**28.0 parts**
Duponal	**2.0 parts**
Perfume	**sufficient**

If you wish to make this an alkaline cream to neutralize industrial acids, I would suggest the incorporation of a small proportion of magnesium hydroxide.

HAIR LACQUER: Would you be good enough to send me the method and a formula for making hair lacquer using bleach shellac as the base? Montreal.

A standard formula for a hair lacquer based on bleached shellac is as follows:

Bleached shellac	**10.0 parts**
Hot water	**68.0 parts**
Borax	**2.0 parts**
Eau de cologne	**30.0 parts**
Dye	**sufficient**

Dissolve the shellac in a hot borax solution, cool and then add the perfume.

PHENOL OINTMENT: Can you give me the formula of an ointment containing phenol in a petrolatum base? Buffalo.

Unguentum Phenolis or phenol ointment of the U.S.P., will probably serve your purpose. This consists of:

Phenol	**2 Gm.**
Yellow ointment	**98 Gm.**

SURGICAL LUBRICATING JELLY: We have had trouble finding a suitable formula for surgical lubricating jelly. Can you suggest a formula that we can work on? Grand Rapids.

The following surgical lubricating jelly given in the Pharmaceutical Recipe Book, Third Edition, is indicative of this type of product:

Tragacanth, in selected ribbons	**25.0 Gm.**
Boric acid	**12.5 Gm.**
Alcohol	**40.0 Gm.**
Glycerine	**80.0 Gm.**
Solution of formaldehyde	**4.0 cc.**
Methyl salicylate, 1% alcoholic solution	**40.0 cc.**
Water, to make	**1000.0 Gm.**

Macerate the tragacanth in the water, in which the boric acid has been dissolved. Strain through fine cheese cloth. Add the alcohol, glycerin, solution of formaldehyde, methyl salicylate, and sufficient water to make the product weigh 1000 Gm.; mix thoroughly.

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